

KRF-V7020D/V8020D

VR-307/309/357

SERVICE MANUAL

KENWOOD

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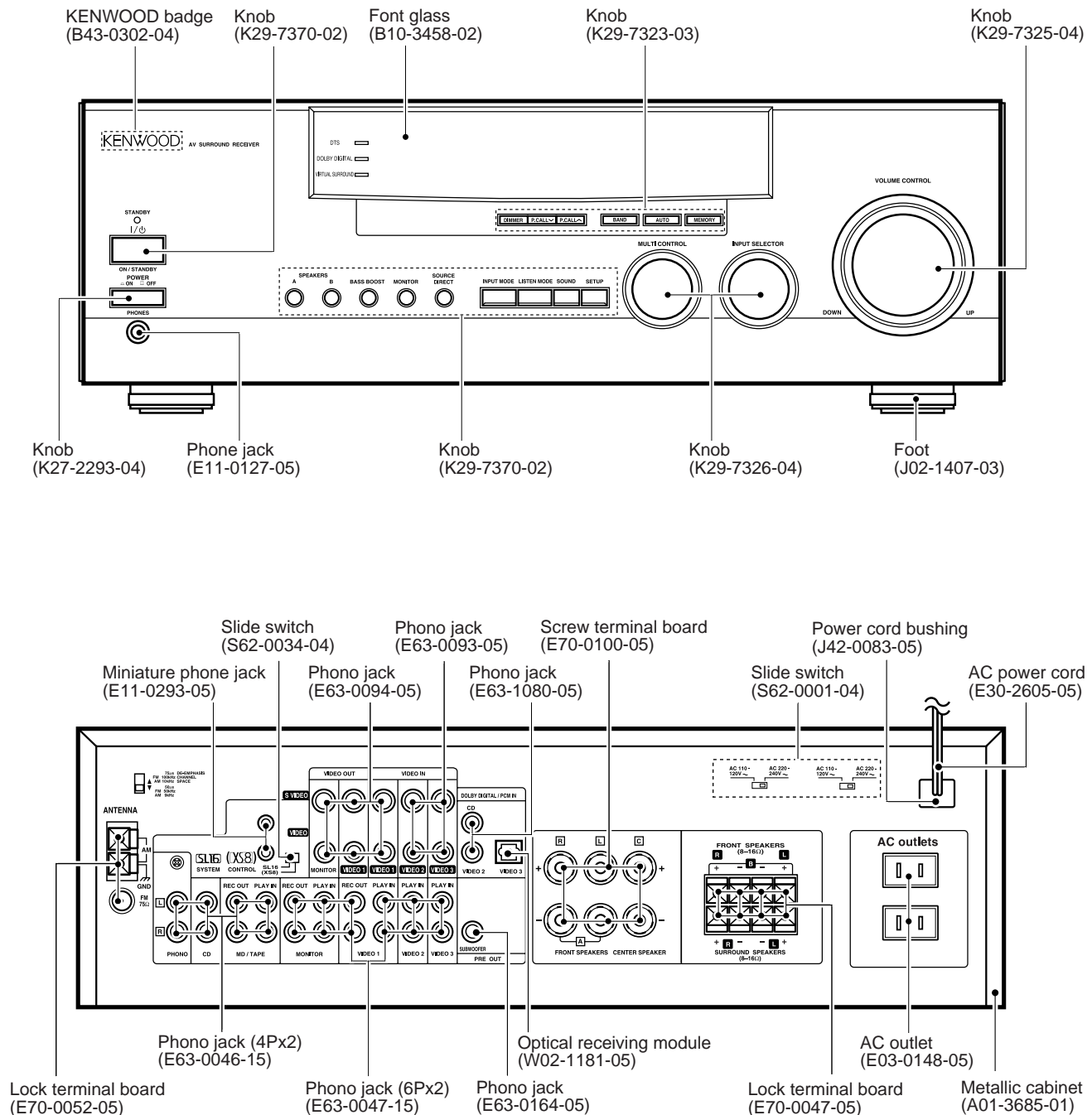


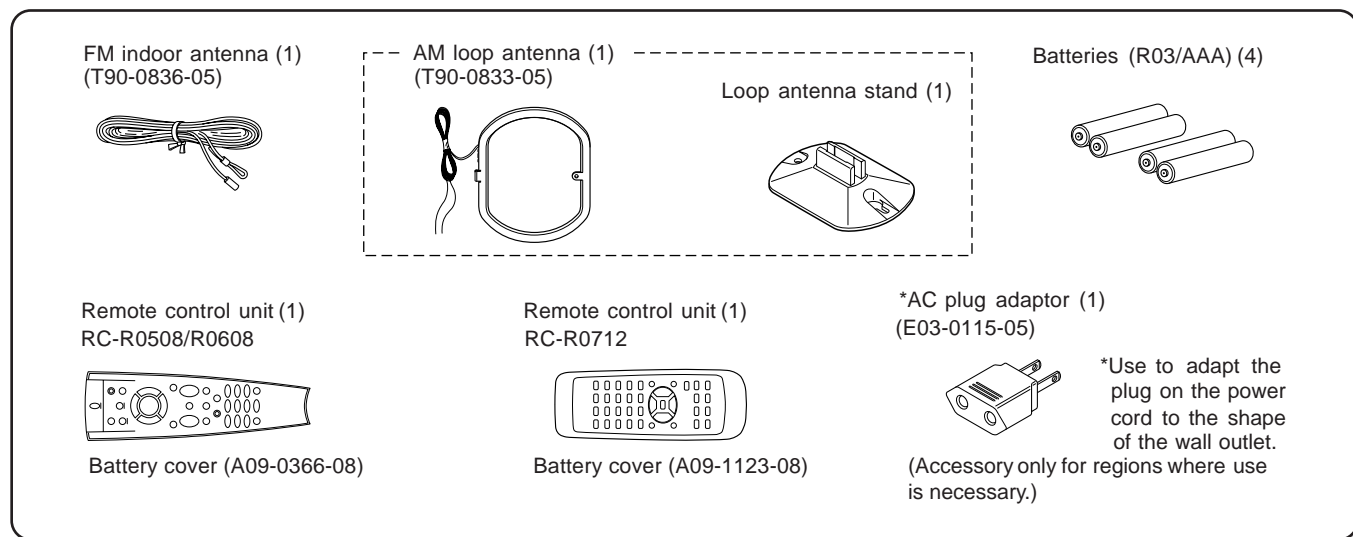
Illustration is KRF-V7020D(Y).

CONTENTS / ACCESSORIES / CAUTIONS

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Accessories



Model name vs remote controller

		Remote Controller		
Model	Destinations	Parts number	Model name	Battery Cover
KRF-V7020D	X7,C7,Y7,V7,M7	A70-1268-05	RC-R0712	A09-1123-08
KRF-V8020D	X8	A70-1275-05	RC-R0508	A09-0366-08
KRF-V8020D	C8,I8,Y8,M8	A70-1277-05	RC-R0608	A09-0366-08
VR-307	K6,P6	A70-1268-05	RC-R0712	A09-1123-08
VR-309	K8,P8	A70-1277-05	RC-R0608	A09-0366-08
VR-357	K7,P7	A70-1277-05	RC-R0608	A09-0366-08

Cautions

Resetting the Microcomputer

If the microcomputer may malfunction (unit cannot be operated, or shows an erroneous display) if the power cord is unplugged while the power is ON, or due to some other external factor. If this happens, execute the following procedure to reset the microcomputer and return the unit to its normal operating condition.

For U.S.A. and Canada

Unplug the power cord from the wall outlet, then plug it back in while holding down the **POWER** key.

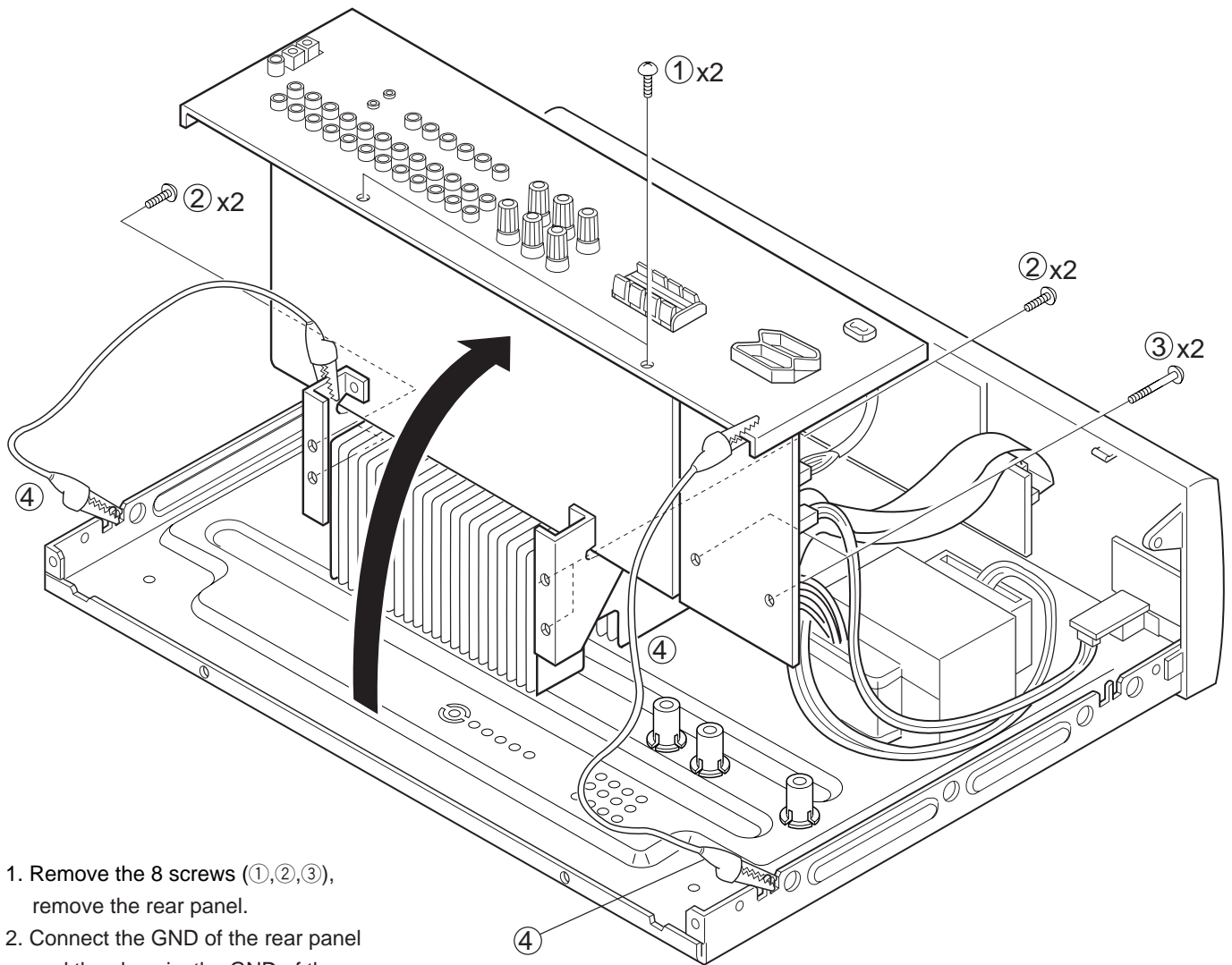
For other countries

With the power cord plugged in, turn the **POWER** key **OFF**. Then, while holding down the **ON/STANDBY** key, press **POWER**.

- Please note that resetting the microcomputer will clear the contents of the memory and returns the unit to the state it was in when it left the factory.

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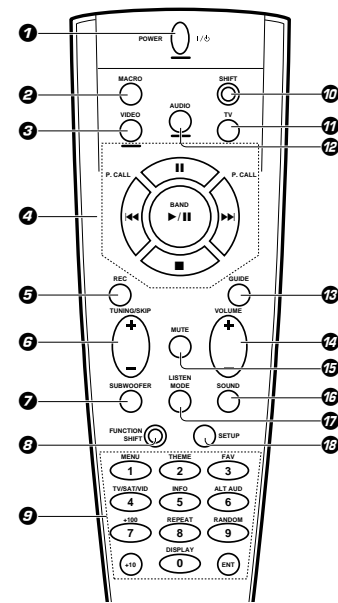
DISASSEMBLY FOR REPAIR



1. Remove the 8 screws (①,②,③),
remove the rear panel.
2. Connect the GND of the rear panel
and the chassis, the GND of the
mounting hardware and the chassis
with 2 alligators clip (④)

CONTROLS

Remote control unit (RC-R0608 / R0508)



There are some cases in which keys (or knobs) that have the same function on the receiver and on the remote control have different names. In the instructions of this manual, if the names of corresponding keys (or knobs) on the receiver and remote control are different, the name of the remote control key is indicated in parentheses.

- ❶ **POWER key**
(For U.S.A. and Canada)
Use to turn the power ON/OFF.
- STANDBY indicator**
- ❶ **ON/STANDBY (1/⏻) key**
(Except for U.S.A. and Canada)
Use to switch the power ON/STANDBY when the POWER is turned ON.
- STANDBY indicator**
- ❷ **POWER key**
(Except for U.S.A. and Canada)
Use to turn the main power ON/OFF.
- ❸ **Surround indicators**
 - **DTS indicator**
Lights when the receiver is in the DTS mode.
(For VR-309, KRF-V8020D)
 - **DOLBY DIGITAL indicator**
Lights when the receiver is in the Dolby Digital mode.
 - **VIRTUAL SURROUND indicator**
Lights when the receiver is in the Virtual Surround mode.

- ❹ **DIMMER key**
Use to adjust the brightness of the display.
- ❺ **P.CALL keys**
Use to call up previously registered radio stations.
- ❻ **BAND key**
Use to select the broadcast band.
- ❼ **AUTO key**
Use to select the auto tuning mode.
- ❽ **MEMORY key**
Use to store radio stations in the preset memory.
- ❾ **VOLUME CONTROL knob**
- ❿ **PHONES jack**
Use for headphone listening.
- ⓫ **SPEAKERS A/B keys**
Use to turn the speakers ON/OFF.
- ⓬ **BASS BOOST key**
Use to select the maximum adjustment setting for the low frequency range.

- ⓭ **MONITOR key**
- ⓮ **SOURCE DIRECT key**
- ⓯ **INPUT MODE key**
Use to switch between the digital and analog inputs.
- ⓰ **LISTEN MODE key**
Use to select the listening mode.
- ⓱ **SOUND key**
Use to adjust the sound quality and ambience effects.
- ⓲ **SETUP key**
Use to select the surround sound settings.
- ⓳ **MULTI CONTROL knob**
Used to make a variety of settings.
- ⓴ **INPUT SELECTOR knob**
Use to select the input sources.

- ❶ **POWER key**
Use to turn the receiver on and off.
Use in combination with the input selector (AUDIO, VIDEO, or TV) keys and SHIFT key to turn various components on and off.
- ❷ **MACRO key**
Use in combination with the AUDIO, VIDEO, or TV keys to execute a series of commands automatically (MACRO PLAY).
- ❸ **VIDEO selector key**
Selects the video inputs and sets the remote control to operate the component registered at the respective input.
- ❹ **Multi control keys**
Use to operate the selected component.
- ❺ **REC key**
Use to operate the selected component.
- ❻ **TUNING/SKIP key**
Use during the setup procedure to specify various settings. Use to operate the tuner or selected component.
- ❼ **SUBWOOFER key**
Use in combination with the VOLUME +/- keys to adjust the volume of the subwoofer.

- ❶ **FUNCTION SHIFT key**
Use in combination with the numeric keys to execute alternate commands.
- ❷ **Numeric keys**
Provide functions identical to those of the original remote control supplied with the component you are controlling.
To access the functions printed above the keys, press within 3 seconds of pressing the FUNCTION SHIFT key. Function availability varies for each component.
- ❸ **SHIFT key**
Use in combination with the AUDIO and VIDEO keys to change the remote control mode without changing the input selector or in combination with the POWER key to turn on and off components programmed into the remote control.
- ❹ **TV selector key**
Sets the remote control to operate a TV or cable box. This key does not change the input selector on the receiver.

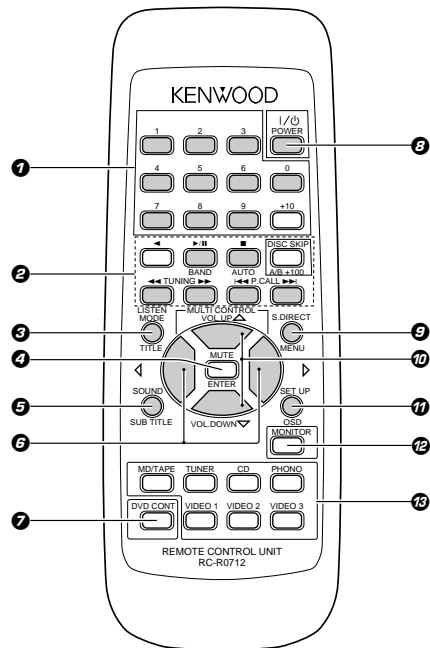
- ❶ **AUDIO selector key**
Selects the audio inputs and sets the remote control to operate the respective KENWOOD audio component.
If you connect audio components from KENWOOD and other makers to the MD/TAPE or CD jacks, you can set the remote control to operate these components by registering the appropriate setup code at the respective input.
- ❷ **GUIDE key**
Use to activate the OSD menu functions of registered components.
- ❸ **VOLUME key**
Use to adjust the receiver volume.
- ❹ **MUTE key**
Use to temporarily mute the sound.
- ❺ **SOUND key**
Use to adjust the sound quality and ambience effects.
- ❻ **LISTEN MODE key**
Use to select the listening mode.
- ❼ **SETUP key**
Use to select the surround sound settings.

About the STANDBY indicator

This unit has a STANDBY indicator. When the STANDBY indicator is lit, the unit consumes a small amount of power to preserve the memory. This is called STANDBY mode. This mode also lets you turn the power ON using the remote control.

CONTROLS

Remote control unit (RC-R0712)



1 Numeric keys

If CD or MD is selected as the input source, these keys function as numeric keys. If tuner is selected as the input source, these keys are used to call up station presets.

2 Component operation keys

Use these keys to operate other components with system control connections to the receiver.

◀ key

If tape is selected as the input source, this key functions as the play key for side B of the cassette (the side facing away from the front of the deck).

BAND (▶/◀) key

If tuner is selected as the input source, this key functions as the band selector key.

If CD is selected as the input source, this key functions as the play/pause key.

If MD is selected as the input source, this key functions as the play key.

DISC SKIP, A/B, +100 key

If CD is selected as the input source, this key functions as the multi-CD player disc skip key.

If TAPE is selected as the input source, this (A and B) of a double cassette deck.

AUTO (■) key

If tuner is selected as the input source, this key functions as the AUTO key.

If CD or MD is selected as the input source, this key functions as the stop key.

TUNING (◀◀ ▶▶) keys

If tuner is selected as the input source, these keys function as tuning keys.

If CD or MD is selected as the input source, these keys function as search keys.

P.CALL (◀◀ ▶▶) keys

If tuner is selected as the input source, these keys function as P.CALL keys.

If CD or MD is selected as the input source, these keys function as skip keys.

5 LISTEN MODE key

Use to select the listening mode.

4 MUTE key

Use to temporarily mute the sound.

5 SOUND key

Use to adjust the sound quality and ambience effects.

6 MULTI CONTROL key

Used to make a variety of settings.

7 DVD CONT key

Used to operate DVD player.

While holding this key depressed, press any of the keys masked in gray in the above illustration to operate the corresponding function of a DVD player from KENWOOD.

Keys 2, 3, 4, 5, 6 and 7 are given the following functions during the DVD player control operation.

2 :TITLE

3 :ENTER

4 :SUB TITLE

5 :MENU

6 :OSD

For details, refer to the instruction manual of your DVD player.

8 POWER key

Use to switch the power ON/STANDBY when the POWER is turned ON.

9 SOURCE DIRECT key

Use to select the surround sound settings.

10 MONITOR key

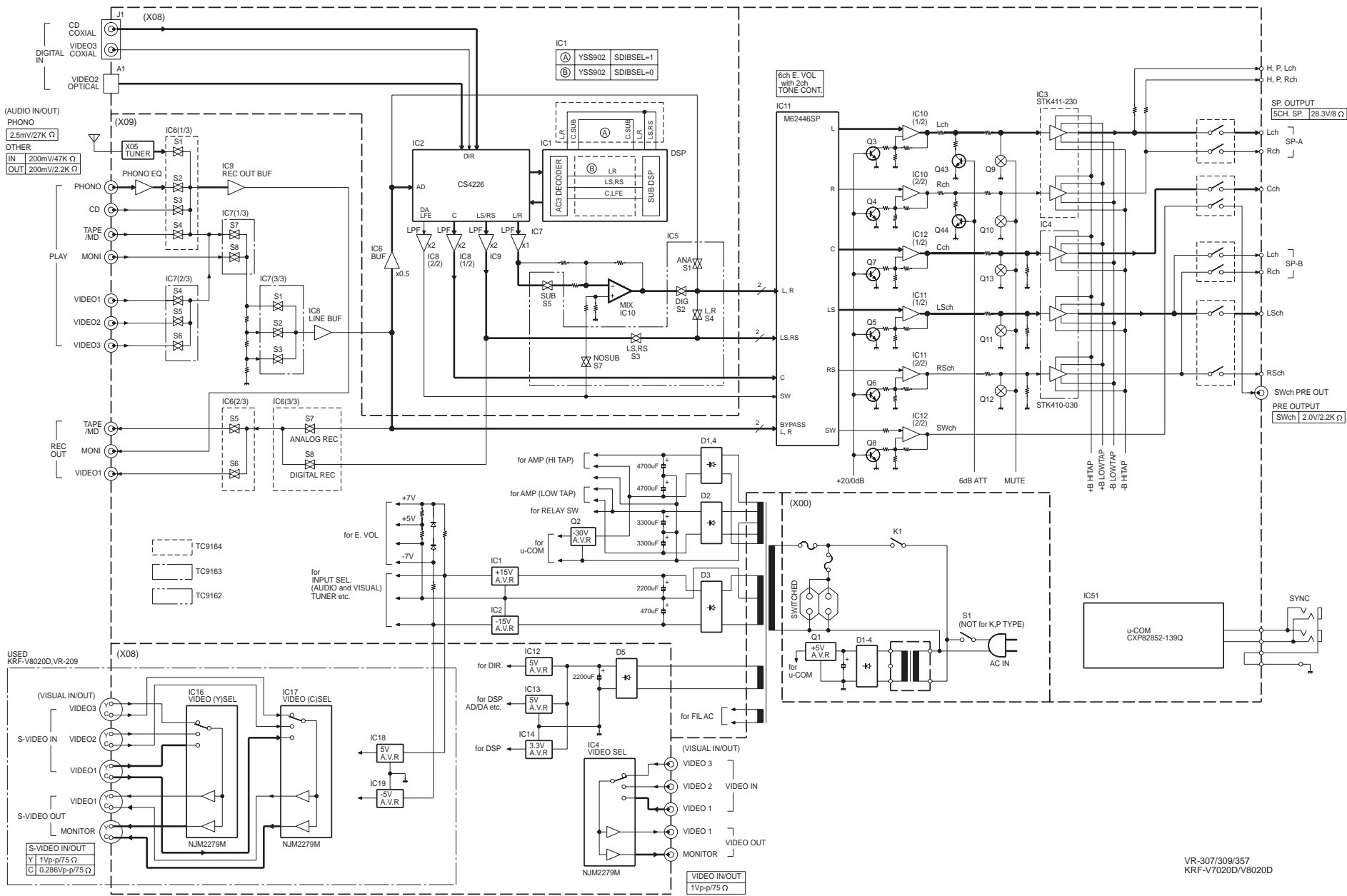
Use to select the receiver's input source.

11 Input selector keys

Use to select the receiver's input source.

KRF-V7020D/V8020D/MR-307/309/357

BLOCK DIAGRAM



VR-307/309/357
KRF-V7020D/V8020D

CIRCUIT DESCRIPTION

1. The back up item and initialization condition

1-1 Back up

• POWER	: POWER OFF	• FRONT (L,R) LEVEL	: 0dB
• VOLUME LEVEL	: -66dB	• CENTER LEVEL	: 0dB
• AUDIO INPUT SELECTOR	: TUNER	• REAR (LS,RS) LEVEL	: 0dB
• VIDEO INPUT SELECTOR	: VIDEO 1	• SUB WOOFER LEVEL	: 0dB
• SPEAKER A	: ON	• MIDNIGHT	: OFF
• SPEAKER B	: OFF	• BAND	: FM
• BASS	: 0dB	• FM FREQUENCY	: 87.50MHz
• TREBLE	: 0dB	• AM FREQUENCY	: 531kHz(CH.SPAC 9kHz) : 530kHz(CH.SPAC 10kHz)
• INPUT LEVEL	: 0dB	• PRESET CH.	: [--ch]
• SOURCE DIRECT	: OFF	• PRESET MEMORY FREQUENCY	: PRESET MEMORY FREQUENCY
• MONITOR	: OFF	• TUNING MODE	: AUTO
• DIMMER	: DIMMER 1 (LIGHTTEST)		
• LISTEN MODE	: STEREO		
• VIRTUAL SURROUND	: OFF		
• INPUT MODE	: DIGITAL AUTO		
• SUB WOOFER	: YES(ON)		
• FRONT SP. SIZE	: NORMAL		
• CENTER SP. SIZE	: NORMAL		
• SURROUND SP. SIZE	: NORMAL		
• DISTANCE	: Fch 10ft/3m : Cch 10ft/3m : Sch 10ft/3m		

1-2 The initial setting

While pressing POWER key, plug the AC power cord into an AC outlet (K,P type) or turn on the AC POWER switch.

2. Condition by the destination or model

(0 : Pull down, 1 : Pull up)

TYPE	BAND	Reception frequency	Channel space	IF	PLL standard frequency	Diode sw			
						⑦⑦ DSW3	⑦⑥ DSW2	⑦⑤ DSW1	⑦④ DSW0
K1 1700	FM	87.5MHz~108.0MHz	100kHz	+10.7MHz	25kHz	0	0	0	0
	AM	530kHz~1700kHz	10kHz	+450kHz	10kHz				
K2 1610	FM	87.5MHz~108.0MHz	100kHz	+10.7MHz	25kHz	0	0	0	1
	AM	530kHz~1610kHz	10kHz	+450kHz	10kHz				
K4 1700 RBDS	FM	87.5MHz~108.0MHz	100kHz	+10.7MHz	25kHz	1	0	1	0
	AM	530kHz~1700kHz	10kHz	+450kHz	10kHz				
E1	FM	87.5MHz~108.0MHz	50kHz	+10.7MHz	25kHz	0	0	1	1
	AM	531kHz~1602kHz	9kHz	+450kHz	9kHz				
E3 RDS	FM	87.5MHz~108.0MHz	50kHz	+10.7MHz	25kHz	0	1	0	1
	AM	531kHz~1602kHz	9kHz	+450kHz	9kHz				
Q1 RDS	FML	65.0MHz~74.0MHz	10kHz	+10.7MHz	5kHz	1	0	1	1
	FMH	87.5MHz~108.0MHz	50kHz	+10.7MHz	5kHz				
	AM	531kHz~1602kHz	9kHz	+450kHz	9kHz				
M	K2/E1 is switched with only the setting of DSW1 (X11 : S601). (DSW1 = 0 : K2 type, 1 : E1 type)					0	0	X	1

3. TEST MODE

[setting method]

While pressing INPUT SELECTOR key, plug the AC power cord into an AC outlet (K, P type) or turn on the AC POWER switch. When a set is set up in test mode condition a set becomes the following condition. Automatic POWER ON. All indicator tube (FL) and CLIP INDICATOR LED are lighted. The other LED are flashed.

A backup at the thing except ON/OFF of POWER is initialized.

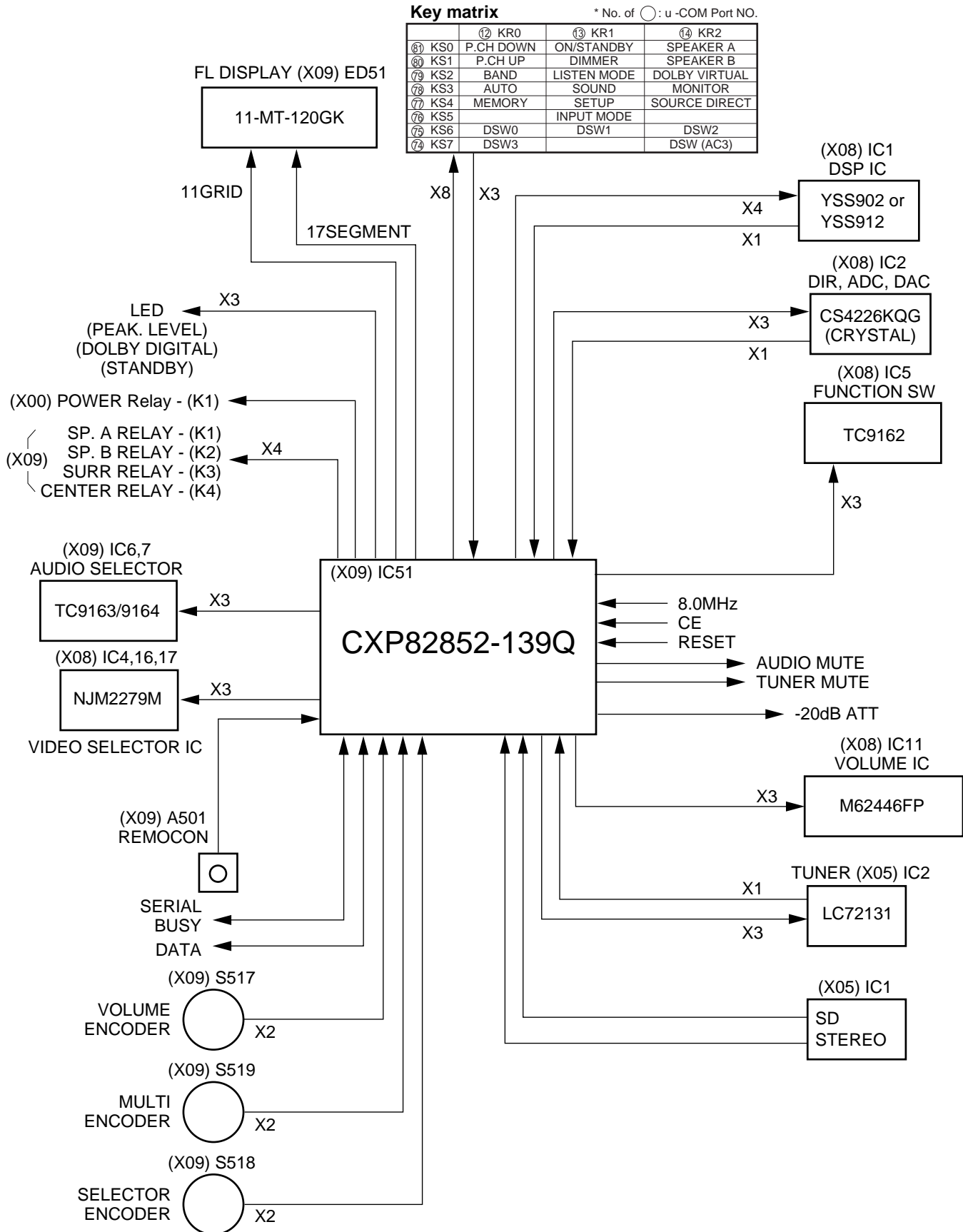
[cancel method]

The power supply is turned off.

CIRCUIT DESCRIPTION

4. Microprocessor CXP82852-139Q(X09 : IC51)

4-1 Microprocessor periphery block diagram



CIRCUIT DESCRIPTION

4-2 Pin description

Pin No.	Pin Name	I/O	Description
1,2	G10,11	O	Display grids 10,11
3	None	-	Ic test mode port.
4,5	None	I	No connect
6	AUDIO	I	Audio signal detection port. L=AUDIO.
7	VOL.ENC.A	I	Volume encoder A(clockwise) input.
8	REMOCON	I	Remote control signal input.
9	VOL.ENC.B	I	Volume encoder B(counterclockwise) input.
10,11	None	O	Ic test mode port.
12-14	KR0-2	I	Key return 0-2.
15	PROTECT	I	Protection signal detection port. H=PROTECT.
16	S.DATA	I/O	Serial DATA signal.
17	S.BUSY	I/O	Serial BUSY signal.
18	SP.A+B	O	Speaker on both A sp. and B sp.
19	SW.6dB.ATT	O	Sub woofer 6dB attenuation
20	SEL.ENC.A	I	Selector encoder A(clockwise) input.
21	SEL.ENC.B	I	Selector encoder B(counterclockwise) input.
22	MULTI.ENC.A	I	Multi encoder A(clockwise) input.
23	MULTI.ENC.B	I	Multi encoder B(counterclockwise) input.
24	SL16/XS8	I	SL16/XS8 selector. H=16bit.
25	DSP.SCK	O	DSP(YSS902/912) CLOCK output.
26	DSP.SI	I	DSP(YSS902/912) DATA input.
27	DSP.SO	O	DSP(YSS902/912) DATA output.
28	Vdd	-	Analog power supply(+5V)
29	None	I	No connect
30	CH.SPACE	O	Channel space chengeover H=E1 type
31	DSP.CS	O	DSP(YSS902/912) CS output.
32	CODEC.CS	O	CS4226 CS output.
33	PLL.DO	I	PLL ic DO signal input .
34	PLL.ST	I	Tuner STEREO signal detection port. L=STEREO.
35	PLL.SD	I	Tuner SD signal detection port. L=TUNED.
36	RCV.CE	I	Receiver CHIP ENABLE signal port. L=ENABLE.
37	Avss	-	Analog GND.
38	RESET	I	Microproessor RESET signal.
39,40	8MHz	I	Main clock generation(8MHz).
41	Vss	-	Microprocessor GND.
42	None	I	No connect
43	TEX	-	GND.
44	Vdd	-	Power supply(+5V).
45	Vfdp	-	Power supply(-33V).
46	SEL.ST1	O	TC9162AF/63AF/64AF ST1 output. H=LATCH.
47	PLL.DT	O	PLL ic DATA signal output .
48	PLL.CK	O	PLL ic CLOCK signal output .
49	PLL.CE	O	PLL ic CE signal output .
50	T.TUNE	O	Tuner mute control. L=MUTE ON
51	A.MUTE	O	Audio mute control. L=MUTE ON
52	SEL.ST2	O	TC9163/9164 ST2 output
53	20dB.ATT	O	Volume 20dB attenuation control. H=ATT. OFF
54	VOL.DT	O	Volume ic (M62446SP) DATA control.
55	VOL.CK	O	Volume ic (M62447SP) CLOCK control. H=ACTIVE
56	VOL.ST	O	Volume ic (M62448SP) ST control. H=ACTIVE
57	DSP.SCB	O	DSP(YSS902/912) chip selector
58	VCR.A	O	Video ic (NJM2279M) cont1 control. H/L=STATIC
59	VCR.B	O	Video ic (NJM2279M) cont3 control. H/L=STATIC
60	FA.RLY	O	Front A speaker relay control. H=RELAY ON

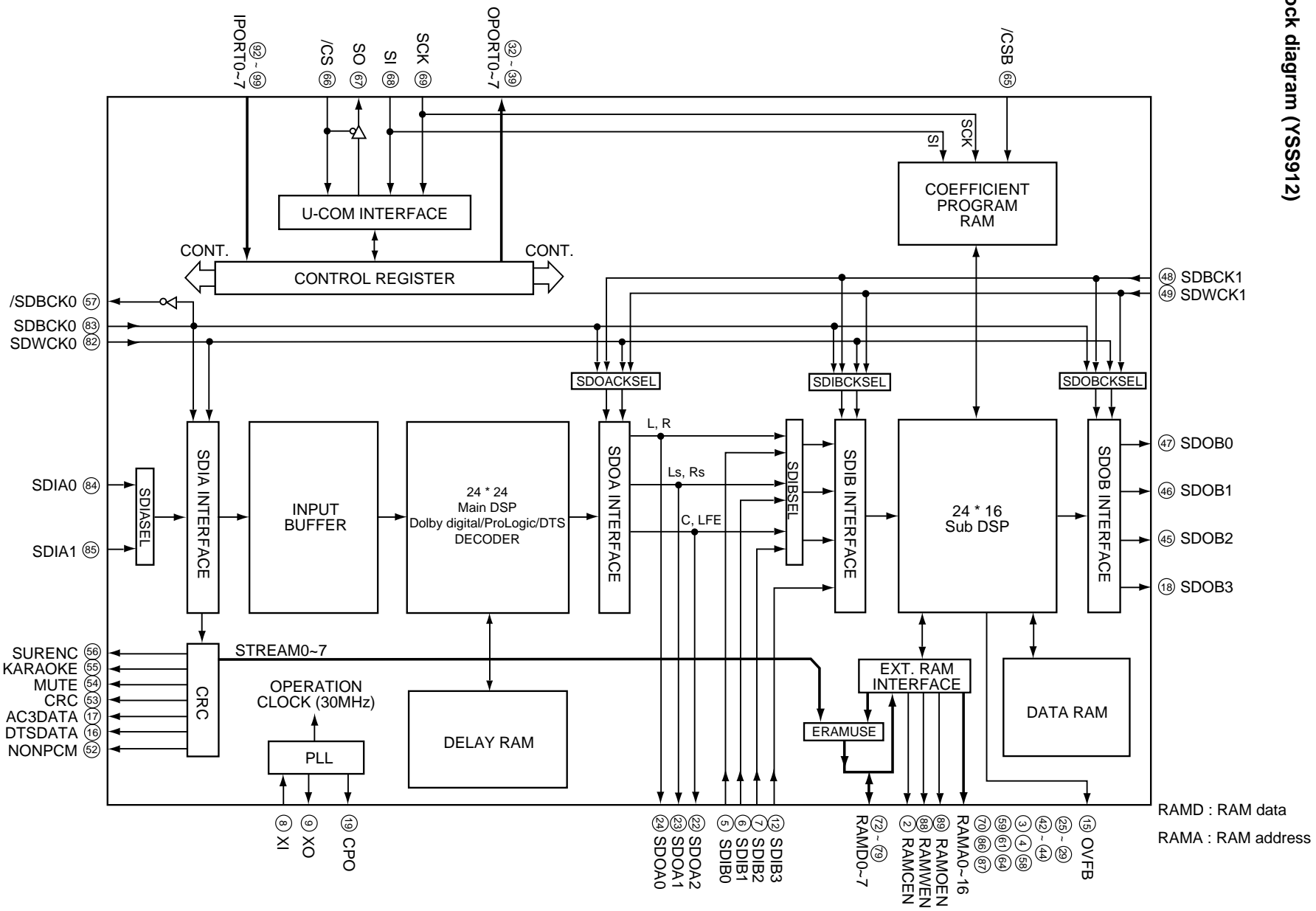
CIRCUIT DESCRIPTION

Pin No.	Pin Name	I/O	Description
61	FB.RLY	O	Front B speaker relay control. H=RELAY ON.
62	C.RLY	O	Center speaker relay control. H=RELAY ON
63	S.RLY	O	Rear speaker relay control. H=RELAY ON
64	POWER.RLY	O	Power relay control. H=RELAY ON
65	STANDBY.LED	O	Standby LED control.H=LED ON
66	DOL.DIG.LED	O	Dolby digital LED control.H=LED ON
67	DOL.VIR.LED	O	Dolby virtual LDE control.H=LED ON
68	DTS LED	O	DTS LED control. H=LED ON
69,70	None	O	No connect
71	PACK CTL	O	Non oscillation of power pack ic at power off. L=STOP OSCILLATION
72	DSP.IC	O	DSP(YSS902/912)/CS4226 initial clear .
73	None	O	No connect
74-81	P1-8/KS7-0	O	Display segments 1-8 & key scan 7-0.
82-88	P9-15	O	Display segments 9-15.
89	Vdd	O	Microprocessor power supply(+5V)
90,91	P16,17	O	Display segments 16,17
92-100	G1-9	O	Display grids 1-9.

CIRCUIT DESCRIPTION

5. Dolby digital/DTS IC: YSS902/YSS912 (X08: IC1)

5-1 Block diagram (YSS912)



CIRCUIT DESCRIPTION

5-2 Pin description

Pin No.	Pin Name	I/O	Descriptions
1	Vdd1	-	Power supply(+5V)
2~4	-	-	No connect
5~7	SDIB0~2	O	PCM output port for sub DSP
8	XI	I	Crystal oscillation port.(902:6.25~50.0MHz,912:12.288MHz)
9	XO	O	Crystal oscillation port.
10	Vss	-	GND
11	AVdd	-	Power supply(+3.3V) for PLL
12~18	-	-	No connect
19	CPO	O	PLL output port.
20	AVss	I	GND
21	Vdd2	-	Power supply(+3.3V)
22	SDOA2	O	PCM output port from main DSP
23	-	-	No connect
24	SDOA0	O	PCM output port from main DSP
25~29	-	-	No connect
30	Vss	-	GND
31	Vdd1	-	Power supply(+5V)
32	-	-	No connect
33	OPORT1	O	-
34~39	-	-	No connect
40	Vss	-	GND
41	Vdd2	-	Power supply(+3.3V)
42~44	-	-	No connect
45	SDO2	O	PCM output port from sub DSP(C,LFE/SWch)
46	SDO1	O	PCM output port from sub DSP(LS,RSch)
47	SDO0	O	PCM output port from sub DSP(FL,FRch)
48,49	-	-	No connect
50	Vss	-	GND
51	Vdd2	-	Power supply(+3.3V)
52~59	-	-	No connect
60	Vss	-	GND
61	-	-	No connect
62	/IC	I	Initial clear port.
63,64	-	-	No connect
66	/CS	I	Microprocessor interface chip selector input port.
67	SO	O	Microprocessor interface serial data output port.
68	SI	I	Microprocessor interface serial data input port.
69	SCK	I	Microprocessor interface clock input port.
70	-	-	No connect
71	Vdd1	-	Power supply(+5V)
72~79	-	-	No connect
80	Vss	-	GND
81	Vdd2	-	Power supply(+3.3V)
82	SDIWCK 0	I	Word clock for SD input ports.
83	SDIBCK 0	I	Bit clock for SD input ports.
84	SDIA	I	AC3 bit stream data input port.
85~89	-	-	No connect
90	Vss	-	GND
91	Vdd2	-	Power supply(+3.3V)
92,93	-	-	No connect
94	IPORT5	I	Input port register
95	-	-	No connect
96~99	IPORT3~0	I	Input port register
100	Vss	-	GND

KRF-V7020D/V8020D/VR-307/309/357

CIRCUIT DESCRIPTION

6. SURROUND FUNCTION IC : TC9162AF(X08:IC5)

[○ : ON, X: OFF]

INPUT	(PIN NO.)	(2,27)	(3,26)	(5,24)	(6,23)	(8,21)	(9,20)	(11,-)	(18,-)
	SW NO.	R1,L1	R2,L2	R3,L3	R4,L4	R5,L5	R6,L6	R7	L7
	OUTPUT	ANALOG	DIGITAL	RS/LS	R/L	SUB W.	VIDEO3	NO SUB W.	NO SUB W.
TEST TONE		X	○	○	X		○		
INPUT DIGITAL		X	○				○		
INPUT ANALOG		○	X				○		
FRONT LARGE		X	X				○		
STEREO		X	X				○		
S. DIRECT		○	X				○		
SP. A,B ON				○	X		○		
SP. A ON				X	○		○		
SP. B ON				X	○		○		
SP. A,B OFF				○	X	X	○	○	X
SUB W. ON						X	○	○	X
SUB W. OFF						○	○	X	○

7. AUDIO INPUT SELECTOR IC : TC9164AF (X09:IC6)

[○ : ON, X: OFF]

INPUT	(PIN NO.)	(2,27)	(3,26)	(4,25)	(5,24)	(7,22)	(9,21)	(10,19)	(11,18)
	SW NO.	R1,L1	R2,L2	R3,L3	R4,L4	R5,L5	R6,L6	R7,L7	R8,L8
	OUTPUT	TUNER	PHONO	CD	MD/TAPE	MD/TAPE REC	VIDEO 1 REC	ANALOG L/R	DIGITAL L/R
TUNER		○	X	X	X	○	○		
PHONO		X	○	X	X	○	○		
CD		X	X	○	X	*1	*1		
MD/TAPE		X	X	X	○	X	○		
VIDEO1		X	X	X	X	○	X		
VIDEO2		X	X	X	X	*1	*1		
VIDEO3		X	X	X	X	*1	*1		
MONITOR		*2	*2	*2	*2	*3	*3		
ANALOG								○	X
INPUT DIGITAL STEREO								X	○
INPUT DIGITAL except STEREO								○	X

*1: It's open except STEREO/VIRTUAL on DTS.

*2: It's the same with MONITOR output.

*3: It's the same MONITOR OFF.

8. AUDIO INPUT SELECTOR IC : TC9162AF (X09:IC7)

[○ : ON, X: OFF]

INPUT	(PIN NO.)	(2,27)	(3,26)	(4,25)	(6,23)	(7,22)	(8,21)	(10,19)	(11,18)
	SW NO.	R1,L1	R2,L2	R3,L3	R4,L4	R5,L5	R6,L6	R7,L7	R8,L8
	OUTPUT	ATT OFF	ATT1	ATT2	VIDEO1	VIDEO2	VIDEO3	COM	MONITOR
TUNER					X	X	X	○	X
PHONO					X	X	X	○	X
CD					X	X	X	○	X
MD/TAPE					X	X	X	○	X
VIDEO1					○	X	X	X	○
VIDEO2					X	○	X	○	X
VIDEO3					X	X	○	○	X
MONITOR					*1	*1	*1	○	X
INPUT 0dB		○	X	X					
INPUT -3dB		X	○	X					
INPUT -6dB		X	X	○					

*1: ,it's the same with display input selector on MONITOR output.

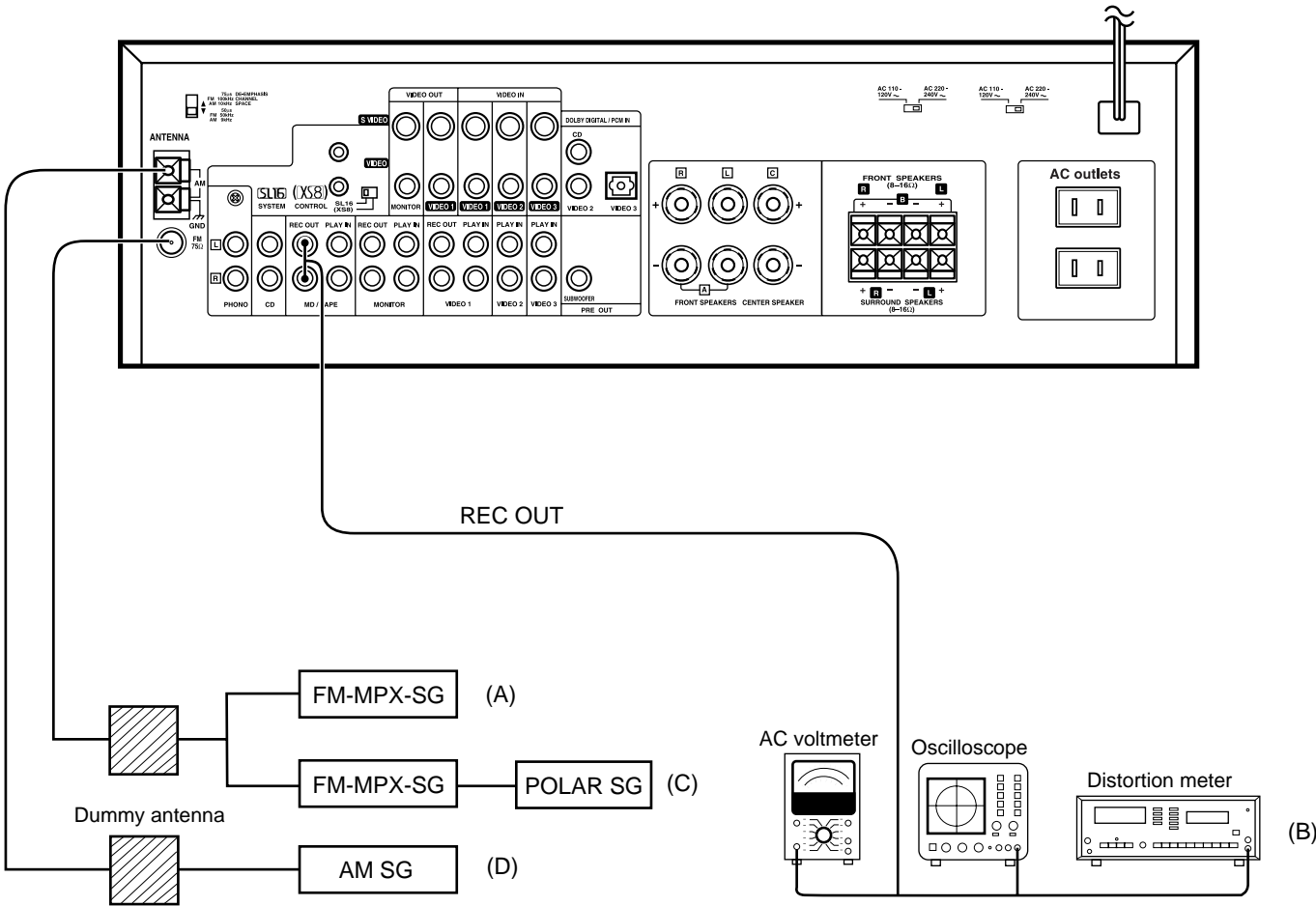
9. SPEAKER SETUP

SUB WOOFER	YES				YES or NO						
FRONT SP.	NORMAL				LARGE						
CENTER SP.	NORMAL(YES)		NO		LARGE		NORMAL		NO		
SURROUND SP.	NORMAL(YES)	NO	NORMAL(YES)	NO	LARGE	NORMAL	NO	NORMAL(YES)	NO	NORMAL(YES)	NO
CENTER MODE (PRO LOGIC)	NORMAL	-	PHANTOM	-	WIDE	WIDE	-	NORMAL	-	PHANTOM	-

KRF-V7020D/V8020D/VR-307/309/357

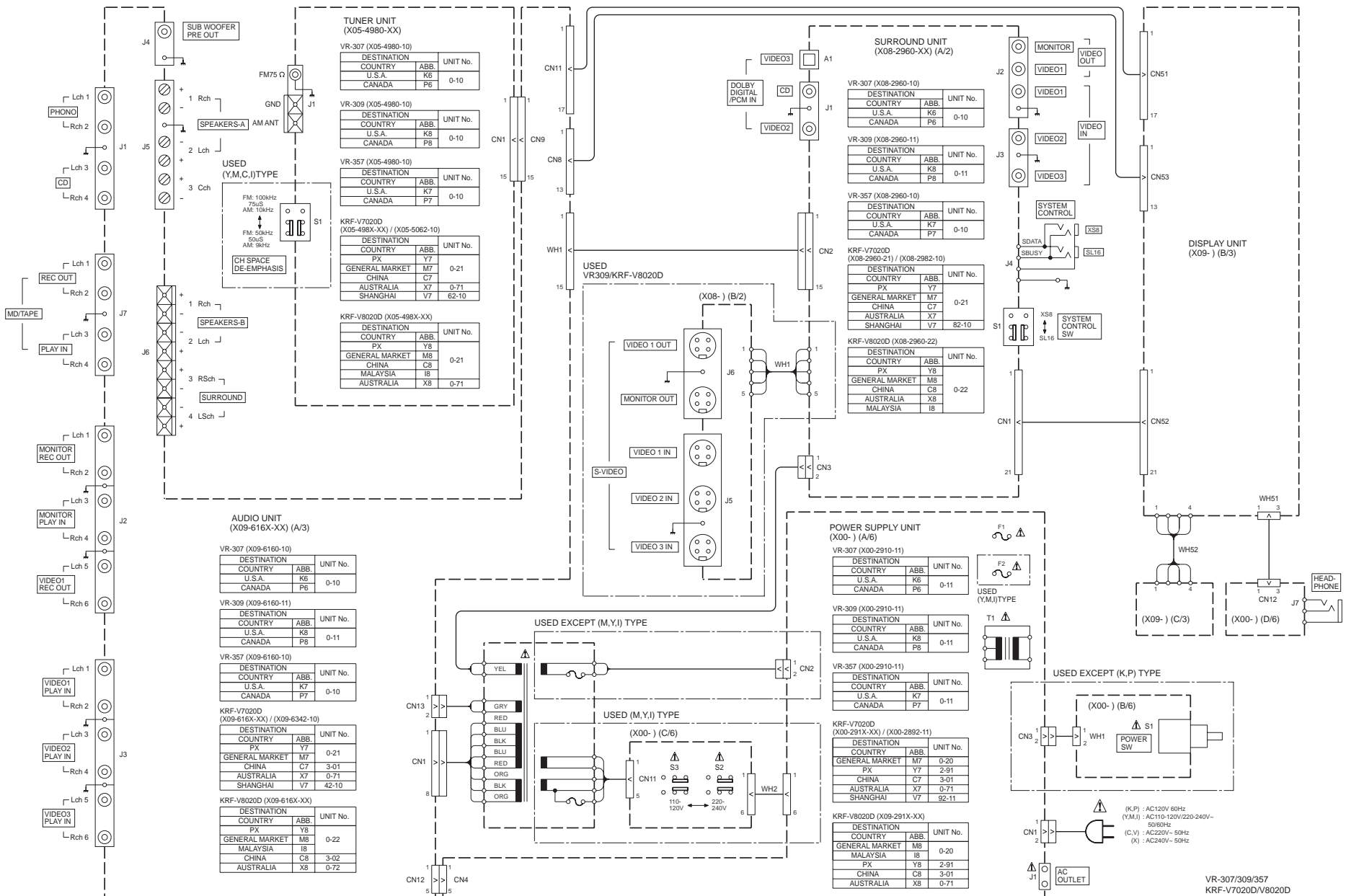
ADJUSTMENT

No.	ITEM	INPUT SETTINGS	OUTPUT SETTINGS	RECEIVER SETTINGS	ALIGNMENT POINTS	ALIGN FOR	FIG.
FM SECTION		SELECTOR : FM					
1	DISTORTION (STEREO)	(A) 98.0MHz 1kHz,±68.25kHz dev. Selector : L or R Pilot : ±6.75kHz dev. 70dBf(ANT. input)	(B)	98.0 MHz	IFT (TUNER A1)	Minimum distortion (L or R)	
2	TUNING LEVER	(A) 98.0MHz MONO 1kHz,±75kHz dev. 25dBf(ANT. input)	(B)	MONO 98.0 MHz	VR1 (TUNER UNIT)	Adjust VR1 and stop at the point where ED51 (TUNED) goes on.	

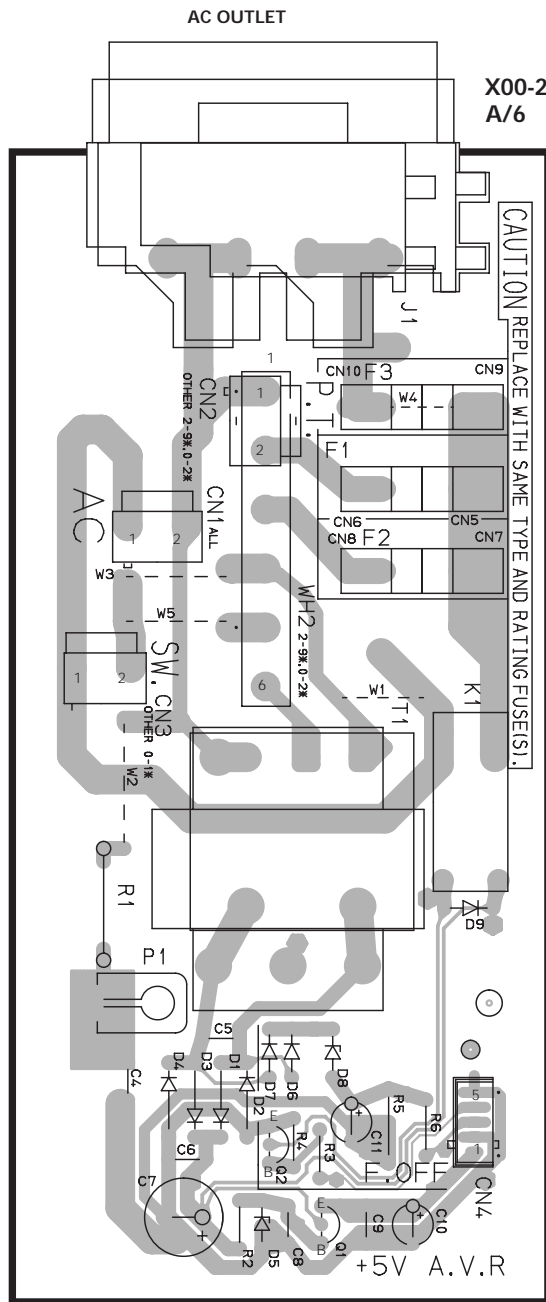


KRF-V7020D/V8020D/VR-307/309/357

WIRING DIAGRAM



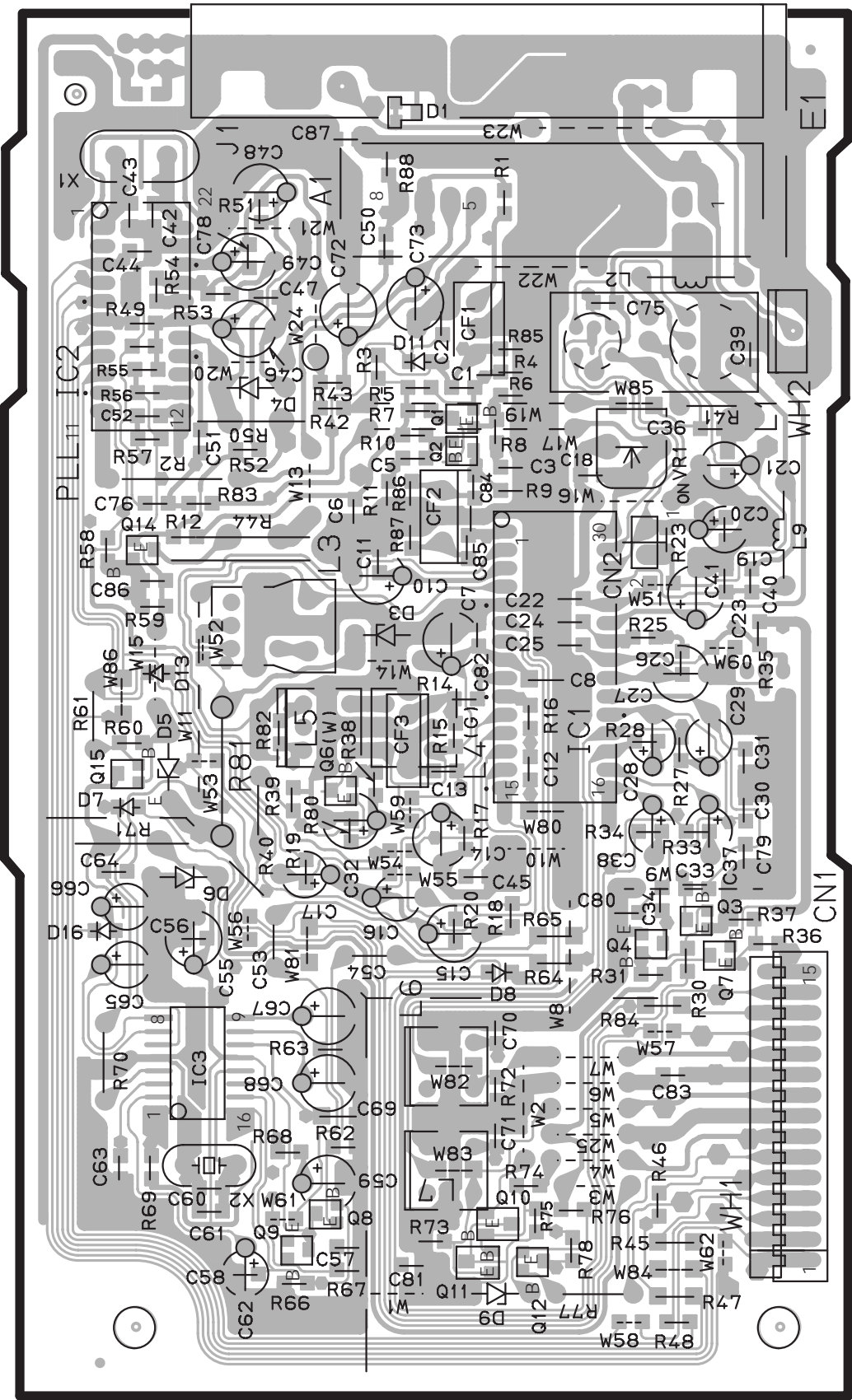
PC BOARD(Component side view) POWER SUPPLY UNIT



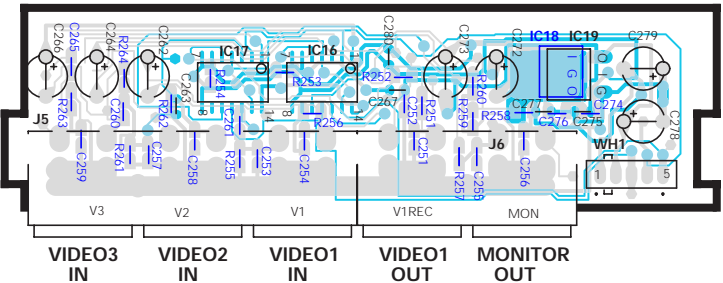
PC BOARD(Component side view)

TUNER UNIT
X05-498X-XX

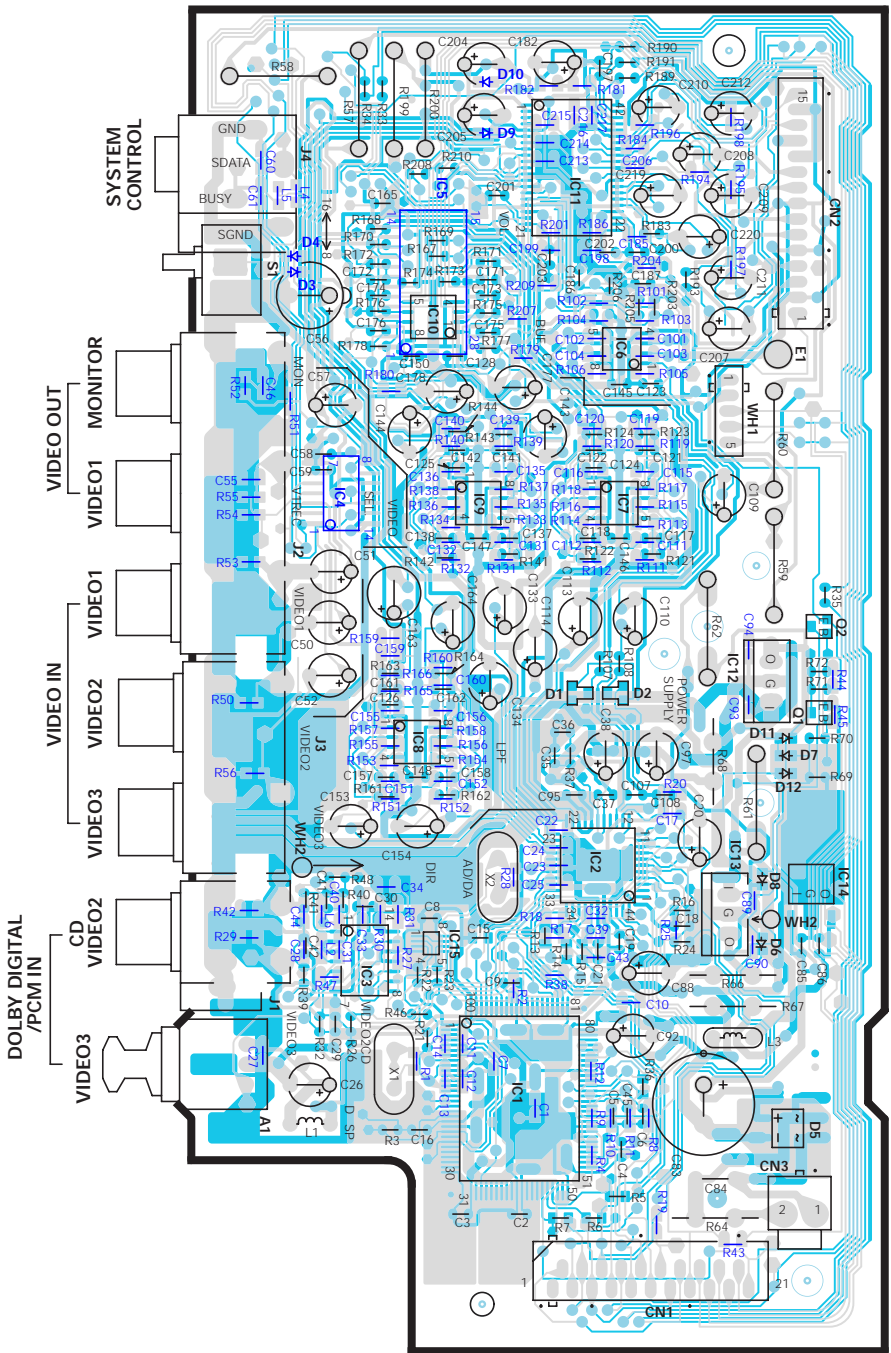
ANTENNA



SURROUND UNIT
X08 B/2

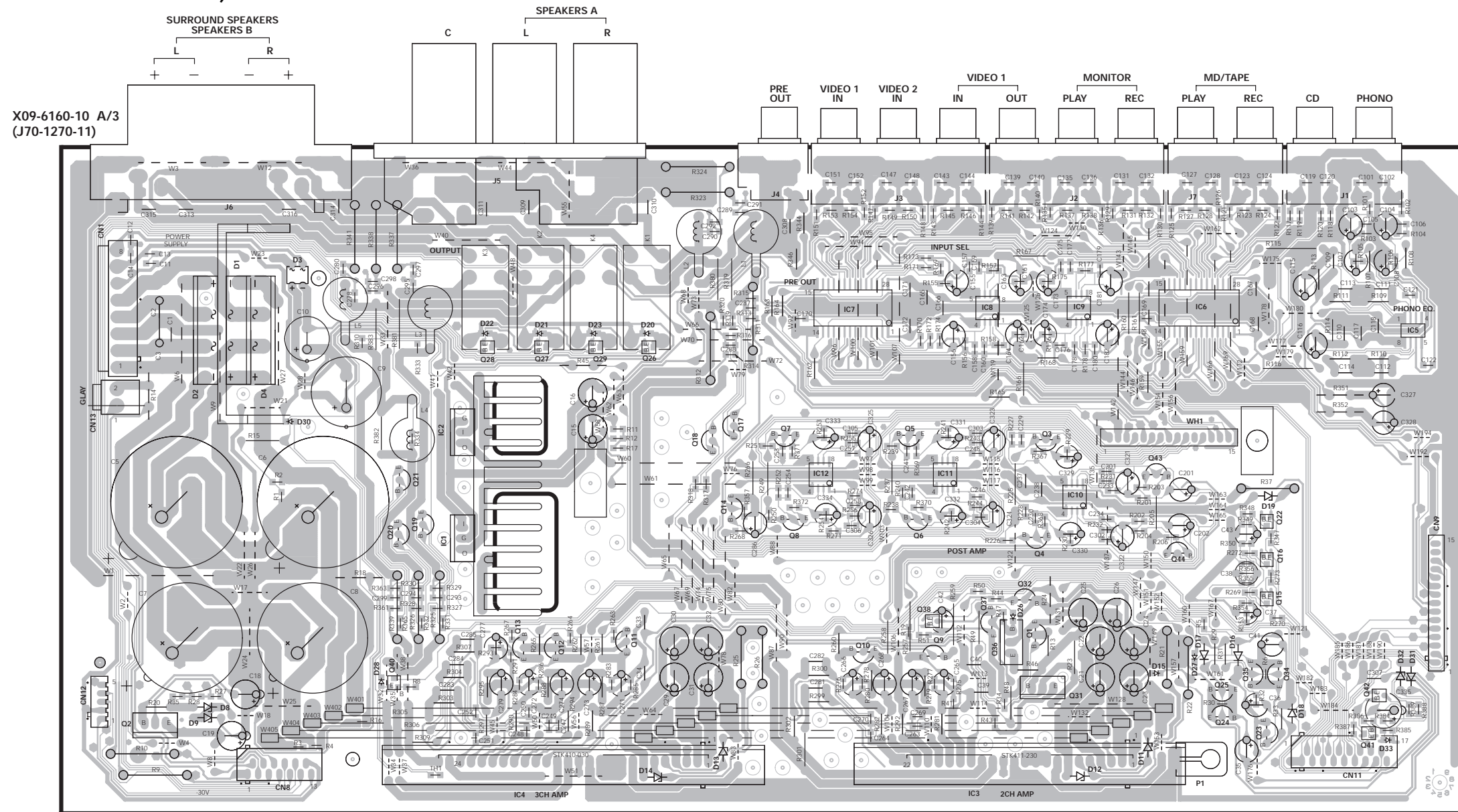


X08-2960-10 A/2 (J70-1268-11)

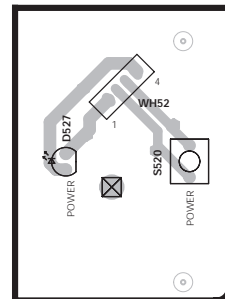


Refer to the schematic diagram for the value of resistors and capacitors.

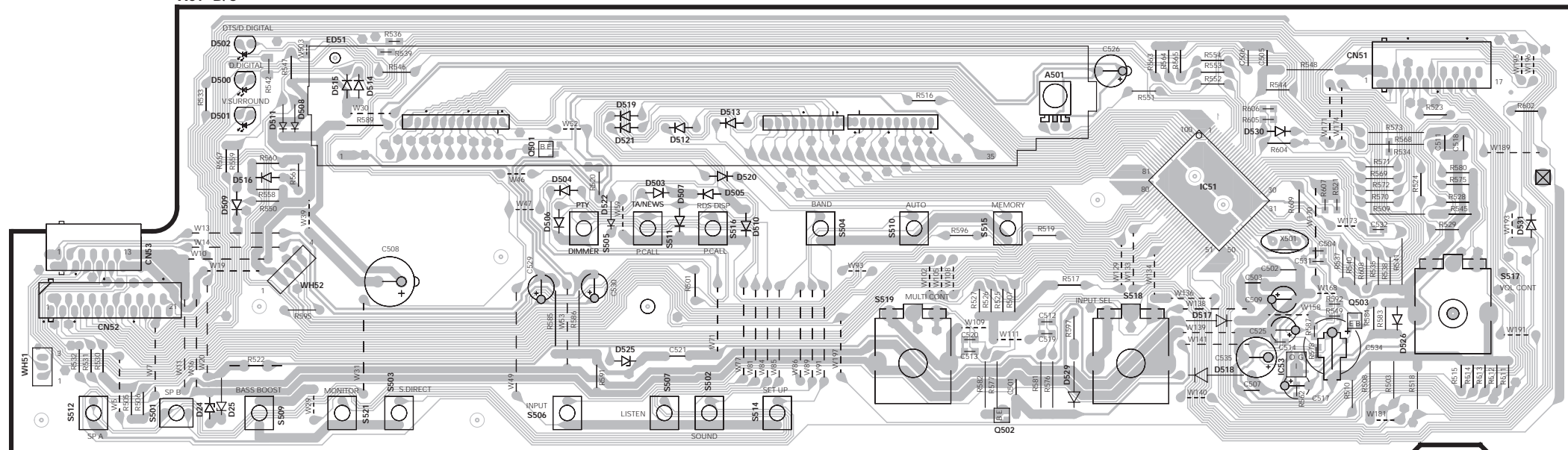
AUDIO UNIT



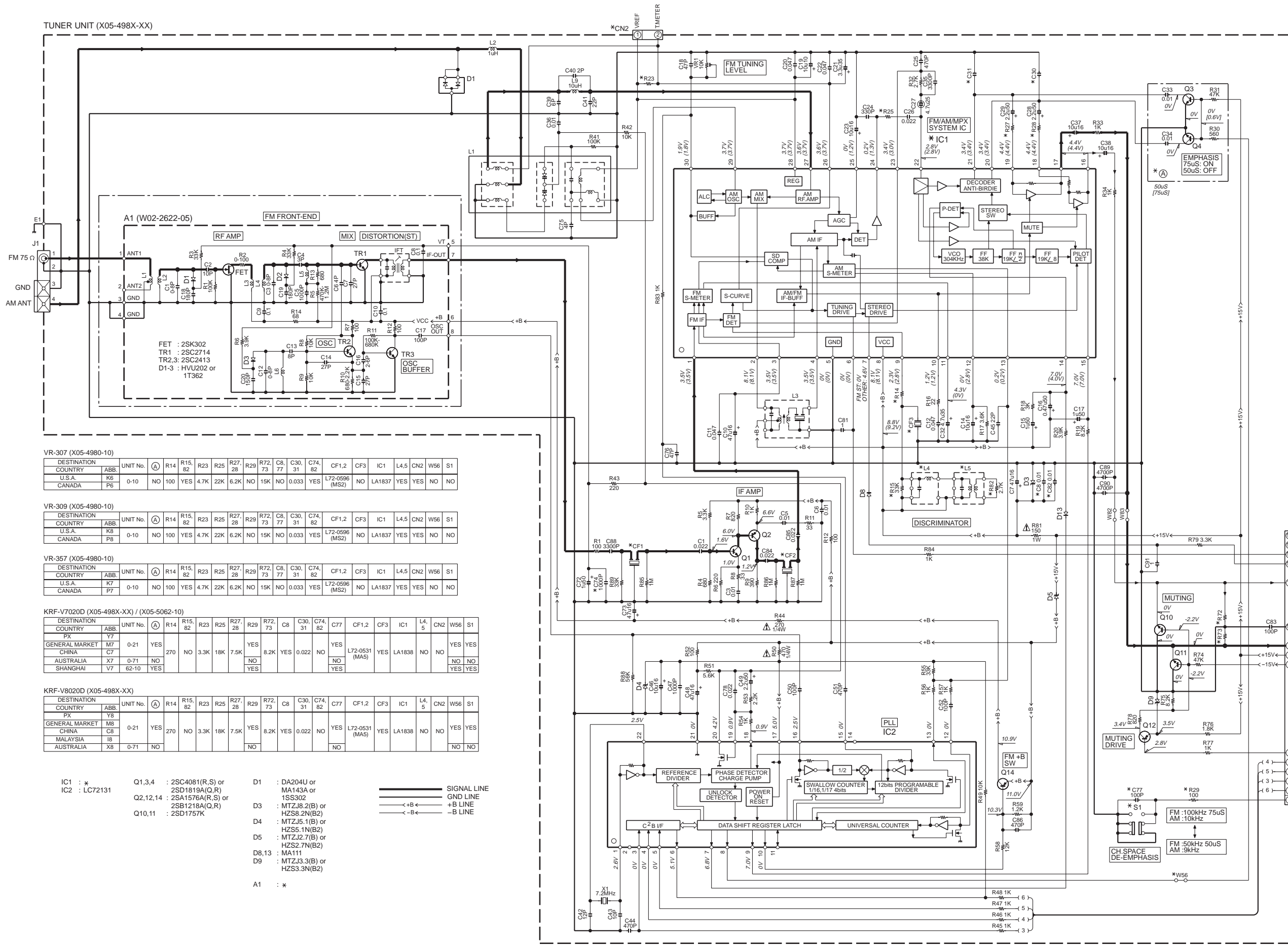
X09 C/3



X09 B/3



TUNER UNIT (X05-498X-XX)



CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). Δ indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

The DC voltage is an actual reading measured with a high impedance type voltmeter as the AM/FM signal generator is specified to the conditions as shown in the list below. The measurement value may vary depending on the measuring instruments used or on the product. The value shown in () is actual reading measured in the AM mode.

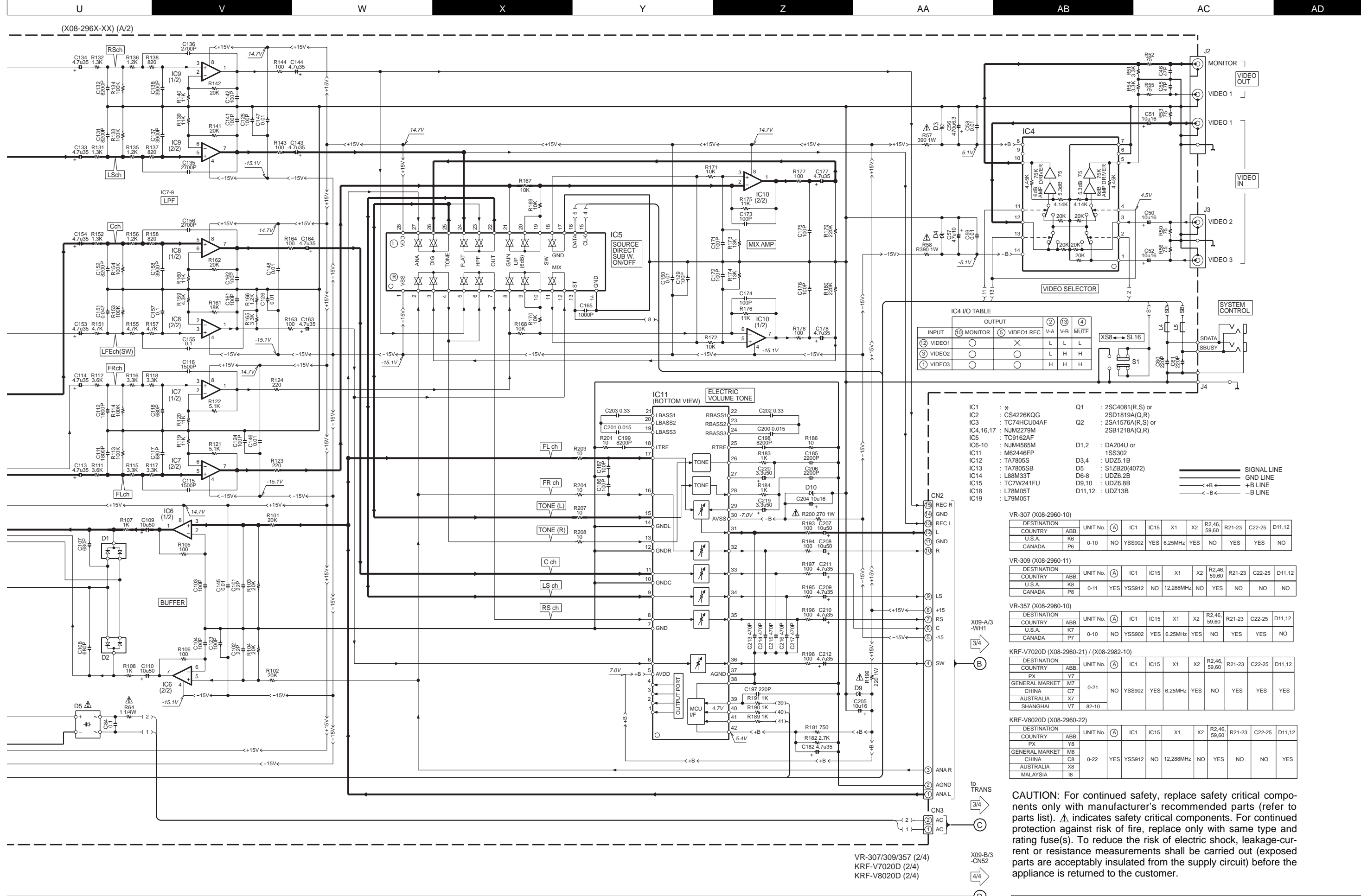
MODE	CARRIER	MODULATION		ANT INPUT
		FREQUENCY	DEVIATION	
FM	98MHz	1kHz	STEREO 67.5kHz 7.5kHz(Pilot)	60dB
AM	1000(999)kHz	400Hz	MONO 30% MOD	60dB

Y05-3760-10

KRF-V7020D/V8020D/VR-307/309/357

KENWOOD





KRF-V7020D/V8020D/VR-307/309/357

KENWOOD

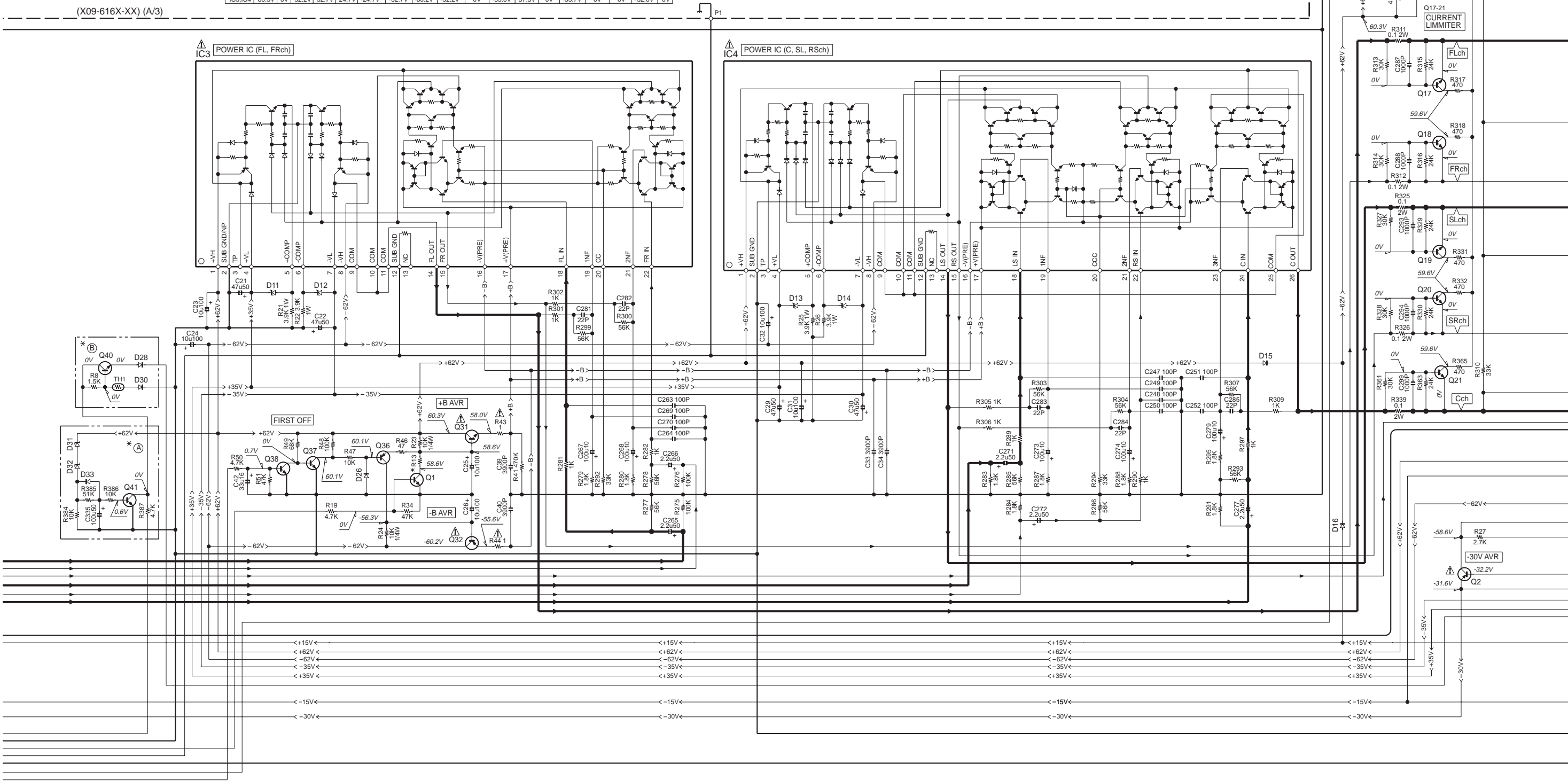
CAUTION: For continued safety, replace safety critical components only with manufacturer's recommended parts (refer to parts list). ⚠ indicates safety critical components. For continued protection against risk of fire, replace only with same type and rating fuse(s). To reduce the risk of electric shock, leakage-current or resistance measurements shall be carried out (exposed parts are acceptably insulated from the supply circuit) before the appliance is returned to the customer.

The DC voltage is an actual reading measured with a high impedance type voltmeter with a cassette loaded at playback mode. The measurement value may vary depending on the measuring instruments used or on the product. Bias circuit DC voltage is measured while in the record mode.

POWER IC(IC3,4) DC VOLTAGE

PIN No.	1	2	3	4	5	6	7	8	9-11	12-15	16	17	18,19	20	21,22	IC4 ONLY	23,24	25	26
IC3,IC4	60.3V	0V	32.2V	32.7V	24.7V	-24.7V	-32.7V	-60.2V	-32.2V	0V	-55.0V	57.5V	0V	-53.7V	0V	0V	-32.0V	0V	

(X09-616X-XX) (A/3)



VR-307 (X09-6160-10)

DESTINATION	UNIT No.	(A)	(B)	R13	C1.2	C3	D1	D4
COUNTRY	ABB.							
U.S.A.	K6	0-10	NO	47K	YES	NO	NO	YES
CANADA	P6							

VR-309 (X09-6160-11)

DESTINATION	UNIT No.	(A)	(B)	R13	C1.2	C3	D1	D4
COUNTRY	ABB.							
U.S.A.	K8	0-11	NO	47K	YES	NO	NO	YES
CANADA	P8							

VR-357 (X09-6160-10)

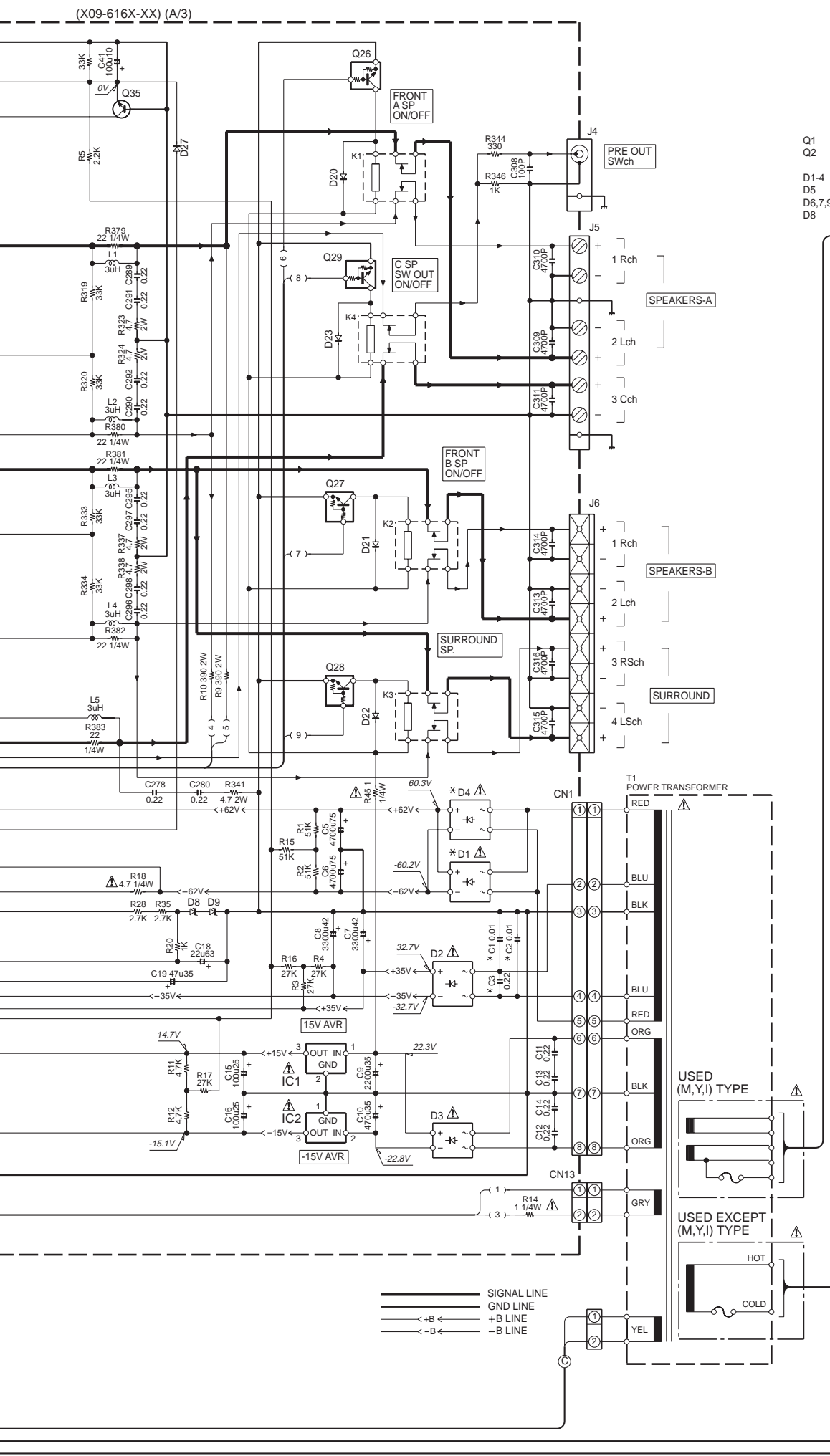
DESTINATION	UNIT No.	(A)	(B)	R13	C1.2	C3	D1	D4
COUNTRY	ABB.							
U.S.A.	K7	0-10	NO	47K	YES	NO	NO	YES
CANADA	P7							

KRF-V7020D (X09-616X-XX) / (X09-6342-10)

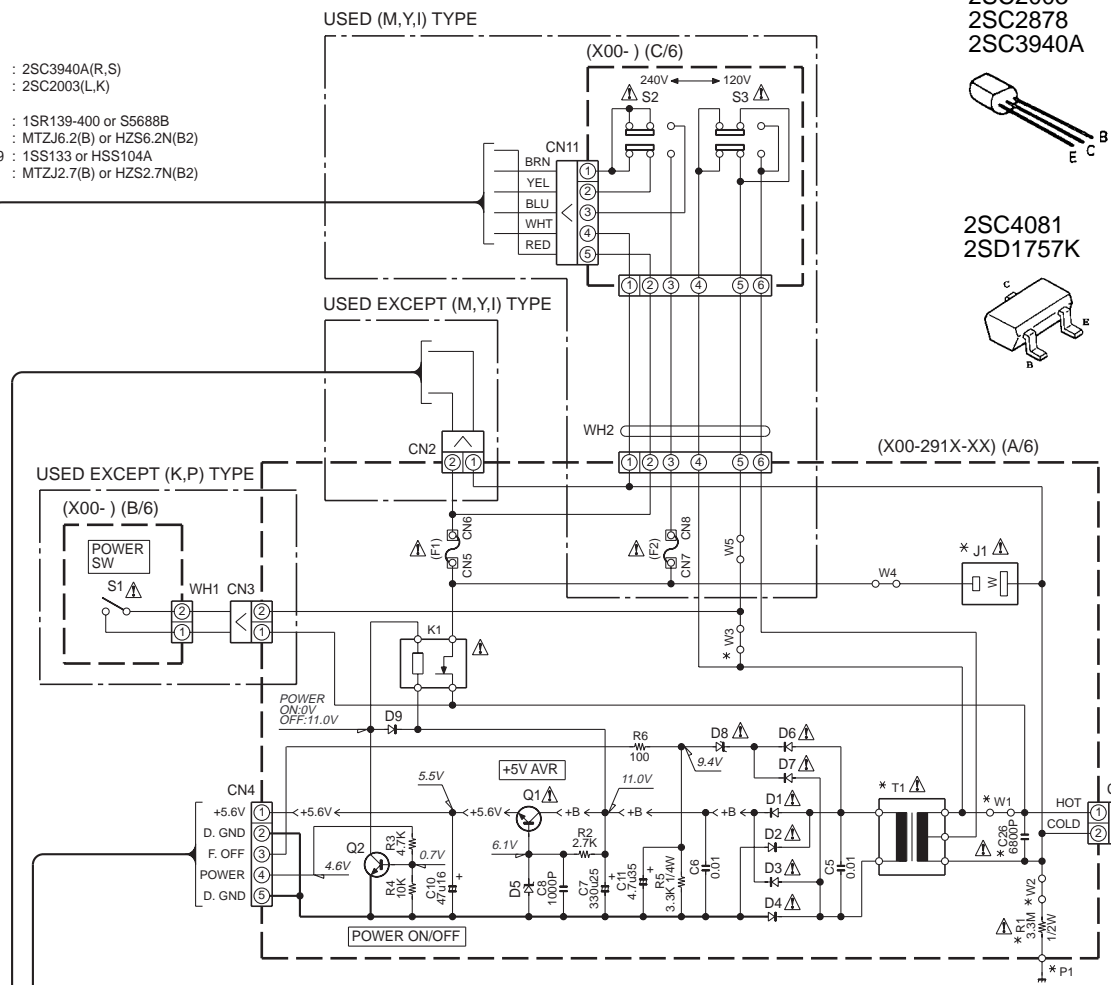
DESTINATION	UNIT No.	(A)	(B)	R13	C1.2	C3	D1	D4
COUNTRY	ABB.							
PX	Y7	0-21	YES	20K	NO	YES		
GENERAL MARKET	M7							
CHINA	C7	3-01	NO	47K	YES	NO	YES	NO
AUSTRALIA	X7	0-71	YES		NO			
SHANGHAI	V7	42-10	NO		NO	NO		

KRF-V8020D (X09-616X-XX)

DESTINATION	UNIT No.	(A)	(B)	R13	C1.2	C3	D1	D4
COUNTRY	ABB.							
PX	Y8			20K				
GENERAL MARKET	M8	0-22	YES		NO	YES		
MALAYSIA	I8			47K			YES	NO
CHINA	C8	3-02	NO		YES	NO		
AUSTRALIA	X8	0-72	YES		NO	YES		



- Q1 : 2SC3940A(R,S)
Q2 : 2SC2003(L,K)
D1-4 : 1SR139-400 or S5688B
D5 : MTZJ6.2(B) or HZS6.2N(B2)
D6,7,9 : 1SS133 or HSS104A
D8 : MTZJ2.7(B) or HZS2.7N(B2)



VR-307 (X00-2910-11)									
DESTINATION	UNIT No.	T1	J1	C26	R1	W1, 2	W3	P1	
COUNTRY	ABB.								
U.S.A.	K6	0-11	L07-2567-05	E03-0148-05	YES	YES	YES	NO	YES
CANADA	P6								

VR-309 (X00-2910-11)									
DESTINATION	UNIT No.	T1	J1	C26	R1	W1, 2	W3	P1	
COUNTRY	ABB.								
U.S.A.	K8	0-11	L07-2567-05	E03-0148-05	YES	YES	YES	NO	YES
CANADA	P8								

VR-357 (X00-2910-11)									
DESTINATION	UNIT No.	T1	J1	C26	R1	W1, 2	W3	P1	
COUNTRY	ABB.								
U.S.A.	K7	0-11	L07-2567-05	E03-0148-05	YES	YES	YES	NO	YES
CANADA	P7								

KRF-V7020D (X00-291X-XX) / (X00-2892-11)									
DESTINATION	UNIT No.	T1	J1	C26	R1	W1, 2	W3	P1	
COUNTRY	ABB.								
GENERAL MARKET	M7	0-20	L07-2568-05	E03-0149-05					
PX	Y7	2-91	L07-2568-05	E03-0148-05				NO	
CHINA	C7	3-01	L07-2569-05	E03-0361-05	NO	NO	NO		NO
AUSTRALIA	X7	0-71	L07-2569-05	E03-0325-05			YES		
SHANGHAI	V7	92-11	L07-2129-05	E03-0361-05					

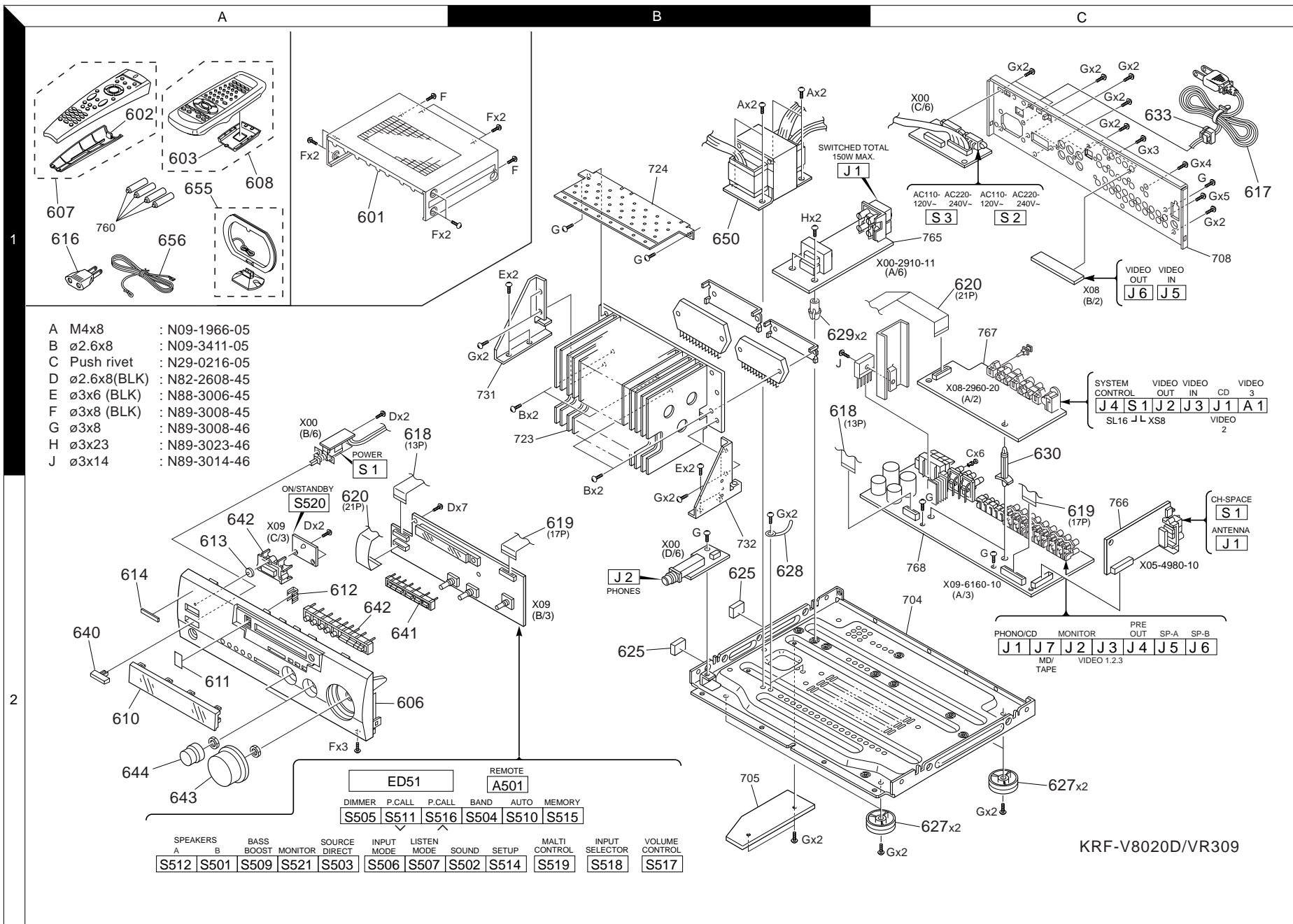
KRF-V8020D (X09-291X-XX)									
DESTINATION	UNIT No.	T1	J1	C26	R1	W1, 2	W3	P1	
COUNTRY	ABB.								
GENERAL MARKET	M8	0-20	L07-2568-05	E03-0149-05					
MALAYSIA	I8							NO	
PX	Y8	2-91	L07-2568-05	E03-0148-05	NO	NO	NO		NO
CHINA	C8	3-01	L07-2569-05	E03-0361-05			YES		
AUSTRALIA	X8	0-71	L07-2569-05	E03-0325-05					

- 2SA1123
2SA992
2SC1845
2SC2003
2SC2878
2SC3940A
- 2SB1218A
2SC3722K
2SD1819A
- 2SA1535A
2SC3944A
- 2SA1285A

- 2SC4081
2SD1757K
- DTC123JUA
- NJM4565M
NJM4565MD
NJM4580ED
- TA7805SB
- DA204U
- TC9162AF
TC9163AF
TC9164AF
- TC74HCU04AF
- NJM2279M
- LC72131

- TA7805S
TA7815S
- L78M05T
- TA79015S
- S-80740AL-A4

- CS4226KQG
- YSS902
YSS912
- LA1837
LA1838
- TC7W241FU
- M62446FP
- L88M33T



* New Parts

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①

Ref. No	Add- ress	New Parts	Parts No.	Description	Desti- nation	Re- marks
KRF-V7020D/V8020D/VR-307/309/357						
601	1A		A01-3533-01	METALLIC CABINET	V	
601	1A	*	A01-3685-01	METALLIC CABINET	KP	
601	1A	*	A01-3685-01	METALLIC CABINET	YMCXI	
602	1A		A09-0366-08	BATTERY COVER	K7P7	
602	1A		A09-0366-08	BATTERY COVER	8	
603	1A		A09-1123-08	BATTERY COVER	K6P6Y7	
603	1A		A09-1123-08	BATTERY COVER	M7C7X7	
603	1A		A09-1123-08	BATTERY COVER	V7	
606	2A	*	A60-1587-01	PANEL	K6P6	
606	2A	*	A60-1588-01	PANEL	Y8	
606	2A	*	A60-1589-01	PANEL	M8X8I8	
606	2A	*	A60-1590-01	PANEL	C8	
606	2A	*	A60-1591-01	PANEL	K6P6	
606	2A	*	A60-1592-01	PANEL	Y7	
606	2A	*	A60-1593-01	PANEL	M7X7	
606	2A	*	A60-1594-01	PANEL	C7	
606	2A	*	A60-1595-01	PANEL	K6P6	
606	2A	*	A60-1662-01	PANEL	V7	
607	1A	*	A70-1275-05	REMOTE CONTROLLER (RC-R0508)	X8	
607	1A	*	A70-1277-05	REMOTE CONTROLLER (RC-R0608)	K7P7	
607	1A	*	A70-1277-05	REMOTE CONTROLLER (RC-R0608)	K8P8M8	
607	1A	*	A70-1277-05	REMOTE CONTROLLER (RC-R0608)	Y8C8I8	
608	1A	*	A70-1268-05	REMOTE CONTROLLER (RC-R0712)	K6P6Y7	
608	1A	*	A70-1268-05	REMOTE CONTROLLER (RC-R0712)	M7C7X7	
608	1A	*	A70-1268-05	REMOTE CONTROLLER (RC-R0712)	V7	
610	2A	*	B10-3457-02	FRONT GLASS	8	
610	2A	*	B10-3458-02	FRONT GLASS	M7	
610	2A	*	B10-3458-02	FRONT GLASS	X7C7Y7	
610	2A	*	B10-3504-02	FRONT GLASS	V7	
611	2A	*	B11-0361-04	SMOKED FILTER	V	
611	2A		B11-0367-04	SMOKED FILTER	KP	
611	2A		B11-0367-04	SMOKED FILTER	YMCXI	
612	2A		B11-0362-04	SMOKED FILTER	V	
612	2A		B11-0375-04	SMOKED FILTER	KP	
612	2A		B11-0375-04	SMOKED FILTER	YMCXI	
613	2A		B12-0334-14	INDICATOR	V	
613	2A		B12-0341-04	INDICATOR	KP	
613	2A		B12-0341-04	INDICATOR	YMCXI	
614	2A		B43-0302-04	KENWOOD BADGE		
-			B46-0096-53	WARRANTY CARD	X	
-			B46-0197-00	QUESTIONNAIRE CARD	K	
-			B46-0330-03	WARRANTY CARD	KY	
-			B46-0336-03	WARRANTY CARD	P	
-			B46-0343-03	WARRANTY CARD	C	
-			B46-0344-03	WARRANTY CARD	V7	
-			B58-0513-04	CAUTION CARD (PRESET220-240)	Y	
-			B58-0964-13	CAUTION CARD (UL)	KY	
-			B58-0965-13	CAUTION CARD (PL)	X	
-			B58-0966-13	CAUTION CARD (ELM/PL)	MI	
-			B58-0967-03	CAUTION CARD (P/PL)	P	
-			B58-1546-03	CAUTION CARD	CV	
-			B59-1104-00	SERVICE DIRECTORY	Y	
-		*	B60-4133-00	INSTRUCTION MANUAL(TC,AC-3)	M8I8	

L : Scandinavia

K : USA

P : Canada

R : Mexico

C : China

I : Malaysia

Y : PX(Far East, Hawaii)

T : Europe

E : Europe

G : Germany

V : China(Shanghai)

Y : AAFES(Europe)

X : Australia

Q : Russia

H : Korea

M : Other Areas

⚠ indicates safety critical components.

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②

Ref. No	Add- ress	New Parts	Parts No.	Description	Desti- nation	Re- marks
-		*	B60-4134-00	INSTRUCTION MANUAL(TC,RC-)	M8I8	
-		*	B60-4139-00	INSTRUCTION MANUAL(EN,AC-3)	KPYMXI	
-		*	B60-4140-00	INSTRUCTION MANUAL(FR,AC-3)	P	
-		*	B60-4141-00	INSTRUCTION MANUAL(ES/TC,AC-3)	M7	
-		*	B60-4142-00	INSTRUCTION MANUAL(SC,AC-3)	CV	
-		*	B60-4144-00	INSTRUCTION MANUAL(EN,RC-)	K7P7	
-		*	B60-4144-00	INSTRUCTION MANUAL(EN,RC-)	K8P8	
-		*	B60-4144-00	INSTRUCTION MANUAL(EN,RC-)	Y8M8I8	
-		*	B60-4145-00	INSTRUCTION MANUAL(FR,RC-)	P7P8	
-		*	B60-4147-00	INSTRUCTION MANUAL(SC,RC-)	C8	
-		*	B60-4148-00	INSTRUCTION MANUAL(EN,RC-)	X8	
△ 616	1A		E03-0115-05	AC PLUG ADAPTER	MI	
△ 617	1C		E30-2592-15	AC POWER CORD	MI	
△ 617	1C		E30-2605-05	AC POWER CORD	Y	
△ 617	1C		E30-2717-05	AC POWER CORD	X	
△ 617	1C		E30-2824-15	AC POWER CORD	V	
△ 617	1C		E30-2870-05	AC POWER CORD	C	
△ 617	1C		E30-2884-05	AC POWER CORD	KP	
618	1A, 1B		E35-2017-05	FLAT CABLE 13P		
619	2B, 2C	*	E35-2260-05	FLAT CABLE 17P		
620	2A, 1C	*	E35-2261-05	FLAT CABLE 21P		
△ F1			F05-3121-05	FUSE (SEMKO) (250V T3.15AL)	CX	
△ F1			F50-0077-05	FUSE(5X20) (125V 8A)	KP	
△ F1			F50-0101-05	FUSE(5X20) (250V T3.15AL)	V	
△ F1, 2			F05-3121-05	FUSE (SEMKO) (250V T3.15AL)	YMI	
625	2B		G11-2415-04	CUSHION	V	
-		*	H10-7552-02	POLYSTYRENE FOAMED FIXTURE	KP	
-		*	H10-7552-02	POLYSTYRENE FOAMED FIXTURE	YMCXI	
-		*	H10-7553-02	POLYSTYRENE FOAMED FIXTURE	KP	
-		*	H10-7553-02	POLYSTYRENE FOAMED FIXTURE	YMCXI	
-		*	H10-7554-02	POLYSTYRENE FOAMED FIXTURE	V	
-			H10-7555-02	POLYSTYRENE FOAMED FIXTURE	V	
-			H25-0232-04	PROTECTION BAG (235X350X0.03)		
-			H25-0391-04	PROTECTION BAG		
-		*	H50-3223-04	ITEM CARTON CASE	K8P8	
-		*	H50-3224-04	ITEM CARTON CASE	Y8X8	
-		*	H50-3225-04	ITEM CARTON CASE	M8I8	
-		*	H50-3226-04	ITEM CARTON CASE	C8	
-		*	H50-3227-04	ITEM CARTON CASE	K6P6	
-		*	H50-3228-04	ITEM CARTON CASE	Y7X7	
-		*	H50-3229-04	ITEM CARTON CASE	M7	
-		*	H50-3230-04	ITEM CARTON CASE	C7	
-		*	H50-3231-04	ITEM CARTON CASE	K7P7	
-		*	H50-3258-04	ITEM CARTON CASE	V7	
627	2C		J02-1167-03	FOOT	V	
627	2C		J02-1168-03	FOOT	MCXI	
627	2C		J02-1407-03	FOOT (D=46,H=14.5,T)	KPY	
628	2B		J19-2808-05	HOLDER		
629	1B		J19-3752-14	UNIT HOLDER	YMCXI	
629	1B		J19-5787-04	UNIT HOLDER	V	
630	1C		J19-5919-05	UNIT HOLDER		
△ 633	1C		J42-0083-05	POWER CORD BUSHING		
-			J61-0307-05	WIRE BAND		

L : Scandinavia

K : USA

P : Canada

R : Mexico

C : China

I : Malaysia

Y : PX(Far East, Hawaii)

T : Europe

E : Europe

G : Germany

V : China(Shanghai)

Y : AAFES(Europe)

X : Australia

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PARTS LIST

KRF-V7020D/V8020D/VR-307/309/357

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3

Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
640	2A		K27-2185-04	KNOB (BUTTON) POWER	V	
640	2A		K27-2275-04	KNOB (BUTTON) POWER	MCXI	
640	2A		K27-2293-04	KNOB (BUTTON) POWER	Y	
641	2A		K29-7310-03	KNOB TUNER,BLK	MCXI	
641	2A		K29-7323-03	KNOB TUNER,GOLD	KPY	
641	2A		K29-7366-03	KNOB TUNER,BLK	V	
642	2A	*	K29-7364-12	KNOB SPEAKER,BLK	V	
642	2A		K29-7370-02	KNOB SPEAKER,GOLD	KPY	
642	2A		K29-7371-02	KNOB SPEAKER,BLK	MCXI	
643	2A		K29-7306-14	KNOB D54,BLK	V	
643	2A		K29-7312-04	KNOB D54,BLK	MCZI	
643	2A		K29-7325-04	KNOB D54,GOLD	KPY	
644	2A		K29-7307-14	KNOB D33,BLK	V	
644	2A		K29-7313-04	KNOB D33,BLK	MCXI	
644	2A		K29-7326-04	KNOB D33,GOLD	KPY	
Δ 650	1B	*	L07-2693-05	POWER TRANSFORMER	KP	
Δ 650	1B	*	L07-2694-05	POWER TRANSFORMER	YMI	
Δ 650	1B	*	L07-2695-05	POWER TRANSFORMER	C	
Δ 650	1B	*	L07-2696-05	POWER TRANSFORMER	X	
Δ 650	1B	*	L07-2708-05	POWER TRANSFORMER	V	
655	1A		T90-0833-05	LOOP ANTENNA		
656	1A		T90-0836-05	LEAD WIRE ANTENNA		
POWER SUPPLY (X00-2910/X00-2892)						
C5, 6			CK45FF1H103Z	CERAMIC 0.010UF Z		
C7			CE04DW1E331M	ELECTRO 330UF 25WV		
C8			CK45FB1H102K	CERAMIC 1000PF K		
C10			CE04KW1C470M	ELECTRO 47UF 16WV		
C11			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
Δ C13, 14			CC45FSL1H101J	CERAMIC 100PF J		
Δ C26			C91-1448-05	FILM 0.0068uF 250VAC	KP	
CN1			E40-4245-05	PIN ASSY		
CN2			E40-4245-05	PIN ASSY	KPCXV	
CN3			E40-4245-05	PIN ASSY	YMICXV	
CN4			E40-8197-05	SOCKET FOR PIN ASSY		
CN11			E40-4281-05	PIN ASSY	YMI	
Δ CN12			E40-3247-05	PIN ASSY		
Δ J1	1B		E03-0148-05	AC OUTLET	KPY	
Δ J1	1B		E03-0149-05	AC OUTLET	MI	
Δ J1	1B		E03-0325-05	AC OUTLET	X	
Δ J1	1B		E03-0361-05	AC OUTLET	CV	
J2	2B		E11-0127-05	PHONE JACK (3P)		
CN5, 6			J13-0075-05	FUSE CLIP		
CN7, 8			J13-0075-05	FUSE CLIP	YMI	
E1			J11-0808-05	WIRE CLAMPER		
Δ T1		*	L07-2129-05	POWER TRANSFORMER	V	
Δ T1			L07-2567-05	POWER TRANSFORMER	KP	
Δ T1			L07-2568-05	POWER TRANSFORMER	YMI	
Δ T1			L07-2569-05	POWER TRANSFORMER	CX	
Δ R1			R92-1844-05	CARBON 3.3M J 1/2W	KP	
Δ K1			S76-0070-05	MAGNETIC RELAY		
Δ S1			S68-0088-05	PUSH SWITCH	V	
Δ S1			S68-0100-05	PUSH SWITCH	YMCXI	
Δ S2, 3			S62-0001-05	SLIDE SWITCH	YMI	

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Ref. No	Add-ress	New Parts	Parts No.	Description	Desti-nation	Re-marks
Δ D1~4			S5688B	DIODE		
Δ D1~4			1SR139-400	DIODE		
D5			HZS6.2N(B2)	ZENER DIODE		
D5			MTZJ6.2(B)	ZENER DIODE		
Δ D6, 7			HSS104A	DIODE		
Δ D6, 7			1SS133	DIODE		
Δ D8			HZS2.7N(B2)	ZENER DIODE		
Δ D8			MTZJ2.7(B)	ZENER DIODE		
D9			HSS104A	DIODE		
D9			1SS133	DIODE		
Δ Q1			2SC3940A(R,S)	TRANSISTOR		
Q2			2SC2003(L,K)	TRANSISTOR		
TUNER (X05-4980/X05-5062)						
C1			CK73FB1H223K	CHIP C 0.022UF K		
C3			CK73FB1H103K	CHIP C 0.010UF K		
C5, 6			CK73FB1H103K	CHIP C 0.010UF K		
C7			CE04LW1C470M	ELECTRO 47UF 16WV		
C8			CK73EB1H103K	CHIP C 0.010UF K	YMCXIV	
C10			CE04LW1C470M	ELECTRO 47UF 16WV		
C11, 12			CK73FB1H473K	CHIP C 0.047UF K		
C14			CE04LW1C100M	ELECTRO 10UF 16WV		
C15			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C16			C90-3251-05	ELECTRO 0.47UF 50WV		
C17			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C18			CC73FCH1H470J	CHIP C 47PF J		
C19			C90-3217-05	ELECTRO 10UF 10WV		
C20			CK73FB1H473K	CHIP C 0.047UF K		
C21			C90-3241-05	ELECTRO 3.3UF 35WV		
C22			CK73FB1H473K	CHIP C 0.047UF K		
C23			CE04LW1C100M	ELECTRO 10UF 16WV		
C24			CK73FB1H331K	CHIP C 330PF K		
C25			CC73FCH1H471J	CHIP C 470PF J		
C26			CK73FB1H223K	CHIP C 0.022UF K		
C27			CE04HW1E4R7M	NP-ELEC 4.7UF 25WV		
C28, 29			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C30, 31			CK73FB1H223K	CHIP C 0.022UF K	YMCXIV	
C30, 31			CK73FB1H333K	CHIP C 0.033UF K	KP	
C32			CE04LW1V4R7M	ELECTRO 4.7UF 35WV		
C33, 34			CK73FB1H103K	CHIP C 0.010UF K	YMCIV	
C35			CK73FB1H332K	CHIP C 3300PF K		
C36			CK73FB1H103K	CHIP C 0.010UF K		
C37, 38			CE04LW1C100M	ELECTRO 10UF 16WV		
C39			CC73FCH1H060D	CHIP C 6.0PF D		
C40			CC73FCH1H020C	CHIP C 2.0PF C		
C41			CC73FCH1H220J	CHIP C 22PF J		
C42			CC73FCH1H120J	CHIP C 12PF J		
C42			CC73FCH1H120J	CHIP C 12PF J	KP	
C42			CC73FCH1H270J	CHIP C 27PF J	YMCXI	
C43			CC73FCH1H100D	CHIP C 10PF D	KP	
C43			CC73FCH1H100D	CHIP C 10PF D	YMCXI	
C43			CC73FCH1H220J	CHIP C 22PF J	V	
C44			CK73FB1H471K	CHIP C 470PF K		
C45			CC73FCH1H220J	CHIP C 22PF J		
C46			CE04LW1C100M	ELECTRO 10UF 16WV		

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C47			CK73FB1H102K	CHIP C 100PF K		
C48			CE04LW1C470M	ELECTRO 47UF 16WV		
C49			CE04LW1H2R2M	ELECTRO 2.2UF 50WV		
C50			CC73FSL1H101J	CHIP C 100PF J		
C51			CK73FB1H471K	CHIP C 470PF K		
C52			CC73FSL1H101J	CHIP C 100PF J		
C72			CE04LW1H010M	ELECTRO 1.0UF 50WV		
C73			CE04LW1C470M	ELECTRO 47UF 16WV		
C74			CK73FB1H102K	CHIP C 1000PF K	KP	
C75			CC73FCH1H040C	CHIP C 4.0PF C		
C76			CC73FCH1H470J	CHIP C 47PF J		
C77			CC73FSL1H101J	CHIP C 100PF J	YMCIV	
C78			CK73FB1H223K	CHIP C 0.022UF K		
C81			CK73FF1C105Z	CHIP C 1.0UF Z		
C82			CK73FB1H103K	CHIP C 0.010UF K	KP	
C83			CC73FSL1H101J	CHIP C 100PF J		
C84, 85			CK73FB1H223K	CHIP C 0.022UF K		
C86			CK73FB1H471K	CHIP C 470PF K		
C88			CK73FB1H332K	CHIP C 3300PF K		
C89, 90			CK73FB1H472K	CHIP C 4700PF K		
C91			CK73FF1C105Z	CHIP C 1.0UF Z		
CN1			E40-9831-05	SOCKET FOR PIN ASSY		
CN2			E40-4871-05	PIN ASSY	KP	
J1	2C		E20-0321-05	LOCK TERMINAL BOARD(2P,F)	KP	
J1	2C		E20-0321-05	LOCK TERMINAL BOARD(2P,F)	YMCXI	
J1	2C		E70-0052-05	LOCK TERMINAL BOARD	KP	
J1	2C		E70-0080-05	LOCK TERMINAL BOARD	YMCXI V	
CF1, 2			L72-0531-05	CERAMIC FILTER	YMCXIV	
CF1, 2			L72-0596-05	CERAMIC FILTER	KP	
CF3			L72-0607-05	CERAMIC FILTER	YMCXIV	
L1			L39-1366-05	COMBINATION COIL		
L2			L40-1091-17	SMALL FIXED INDUCTOR(1UH)		
L3			L30-0911-05	AM IFT		
L4			L30-0950-05	FM IFT	KP	
L5			L30-0951-05	FM IFT	KP	
L9			L40-1001-17	SMALL FIXED INDUCTOR(10UH,K)		
X1			L77-2187-05	CRYSTAL RESONATOR	V	
X1			L77-2232-05	CRYSTAL RESONATOR	KP	
X1			L77-2232-05	CRYSTAL RESONATOR	YMCXI	
R1			RK73FB2A101J	CHIP R 100 J 1/10W		
R4			RK73FB2A681J	CHIP R 680 J 1/10W		
R5			RK73FB2A332J	CHIP R 3.3K J 1/10W		
R6			RK73FB2A221J	CHIP R 220 J 1/10W		
R7			RK73FB2A821J	CHIP R 820 J 1/10W		
R8			RK73FB2A330J	CHIP R 33 J 1/10W		
R9			RK73FB2A391J	CHIP R 390 J 1/10W		
R10			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R11			RK73FB2A330J	CHIP R 33 J 1/10W		
R12			RK73FB2A101J	CHIP R 100 J 1/10W		
R14			RK73FB2A101J	CHIP R 100 J 1/10W	KP	
R14			RK73FB2A271J	CHIP R 270 J 1/10W	YMCXIV	
R15			RK73FB2A333J	CHIP R 33K J 1/10W	KP	

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R16			RK73FB2A220J	CHIP R 22 J 1/10W		
R17			RK73FB2A362J	CHIP R 3.6K J 1/10W		
R18			RK73FB2A302J	CHIP R 3.0K J 1/10W		
R19			RK73FB2A822J	CHIP R 8.2K J 1/10W		
R20			RK73FB2A392J	CHIP R 3.9K J 1/10W		
R23			RK73FB2A332J	CHIP R 3.3K J 1/10W	YMCXIV	
R23			RK73FB2A472J	CHIP R 4.7K J 1/10W	KP	
R25			RK73FB2A183J	CHIP R 18K J 1/10W	YMCXIV	
R25			RK73FB2A223J	CHIP R 22K J 1/10W	KP	
R27, 28			RK73FB2A512J	CHIP R 5.1K J 1/10W	KP	
R27, 28			RK73FB2A622J	CHIP R 6.2K J 1/10W	YMCXI	
R27, 28			RK73FB2A752J	CHIP R 7.5K J 1/10W	V	
R29			RK73FB2A101J	CHIP R 100 J 1/10W	YMCIV	
R30			RK73FB2A561J	CHIP R 560 J 1/10W	YMCIV	
R31			RK73FB2A473J	CHIP R 47K J 1/10W	YMCIV	
R32			RK73FB2A272J	CHIP R 2.7K J 1/10W		
R33, 34			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R42			RK73FB2A103J	CHIP R 10K J 1/10W		
R43			RK73FB2A221J	CHIP R 220 J 1/10W		
R44			RD14NB2E271J	RD 270 J 1/4W		
R45			RK73EB2B102J	CHIP R 1.0K J 1/8W		
R46			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R47			RK73EB2B102J	CHIP R 1.0K J 1/8W		
R48			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R49			RK73FB2A103J	CHIP R 10K J 1/10W		
Δ R50			RD14NB2E471J	RD 470 J 1/4W		
R51			RK73FB2A562J	CHIP R 5.6K J 1/10W		
R52			RK73FB2A101J	CHIP R 100 J 1/10W		
R53			RK73FB2A222J	CHIP R 2.2K J 1/10W		
R54			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R55			RK73FB2A333J	CHIP R 33K J 1/10W		
R56, 57			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R58			RK73FB2A123J	CHIP R 12K J 1/10W		
R59			RK73FB2A122J	CHIP R 1.2K J 1/10W		
R72, 73			RK73FB2A153J	CHIP R 15K J 1/10W	KP	
R72, 73			RK73FB2A822J	CHIP R 8.2K J 1/10W	YMCXIV	
R74			RK73FB2A473J	CHIP R 47K J 1/10W		
R75			RK73FB2A822J	CHIP R 8.2K J 1/10W		
R76			RK73FB2A182J	CHIP R 1.8K J 1/10W		
R78			RK73FB2A821J	CHIP R 820 J 1/10W		
Δ R79			RK73FB2A332J	CHIP R 3.3K J 1/10W		
R81			RS14KB3A151J	FL-PROOF RS 150 J 1W		
R82			RK73FB2A272J	CHIP R 2.7K J 1/10W	KP	
R83			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R84			RK73EB2B102J	CHIP R 1.0K J 1/8W		
R85~87			RK73FB2A105J	CHIP R 1.0M J 1/10W		
R88			RK73FB2A563J	CHIP R 56K J 1/10W		
R89			RK73FB2A333J	CHIP R 33K J 1/10W		
VR1			R32-0037-05	SEMI FIXED VARIABLE RESISTOR		
W51, 52			R92-0670-05	CHIP R 0 OHM		
W54~56			R92-0670-05	CHIP R 0 OHM	YMCIV	
W54, 55			R92-0670-05	CHIP R 0 OHM	KPX	
W59			R92-0670-05	CHIP R 0 OHM		
W62			R92-0670-05	CHIP R 0 OHM		
W80			R92-0679-05	CHIP R 0 OHM		

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W82-85			R92-0679-05	CHIP R 0 OHM		
S1	2C		S62-0034-05	SLIDE SWITCH	YMCIV	
D1			DA204U	DIODE		
D1			MA143A	DIODE		
D1			1SS302	DIODE		
D3			HZS8.2N(B2)	ZENER DIODE		
D3			MTZJ8.2(B)	ZENER DIODE		
D4			HZS5.1N(B2)	ZENER DIODE		
D4			MTZJ5.1(B)	ZENER DIODE		
D5			HZS2.7N(B2)	ZENER DIODE		
D5			MTZJ2.7(B)	ZENER DIODE		
D8			MA111	DIODE		
D9			HZS3.3N(B2)	ZENER DIODE		
D9			MTZJ3.3(B)	ZENER DIODE		
D13			MA111	DIODE		
IC1			LA1837	ANALOGUE IC	KP	
IC1			LA1838	ANALOGUE IC	YMCXIV	
IC2			LC72131	MOS-IC		
Q1			2SC4081(R,S)	TRANSISTOR		
Q1			2SD1819A(Q,R)	TRANSISTOR		
Q2			2SA1576A(R,S)	TRANSISTOR		
Q2			2SB1218A(Q,R)	TRANSISTOR		
Q3, 4			2SC4081(R,S)	TRANSISTOR	YMCIV	
Q3, 4			2SD1819A(Q,R)	TRANSISTOR	YMCIV	
Q10, 11			2SD1757K	TRANSISTOR		
Q12			2SA1576A(R,S)	TRANSISTOR		
Q12			2SB1218A(Q,R)	TRANSISTOR		
Q14			2SA1576A(R,S)	TRANSISTOR		
Q14			2SB1218A(Q,R)	TRANSISTOR		
A1			W02-2622-05	FM FRONT-END ASSY		
SURROUND (X08-2960/X08-2982)						
C1-4			CK73FB1E104K	CHIP C 0.10UF K		
C5, 6			CC73FSL1H102J	CHIP C 1000PF J		
C7-9			CK73FB1E104K	CHIP C 0.10UF K		
C10			CC73FSL1H331J	CHIP C 330PF J		
C11, 12			CC73FCH1H150J	CHIP C 15PF J		
C13, 14			CC73FCH1H180J	CHIP C 18PF J		
C15			CC73FSL1H101J	CHIP C 100PF J		
C16			CC73FSL1H471J	CHIP C 470PF J		
C17			CK73FB1H103K	CHIP C 0.010UF K		
C18			CC73FSL1H102J	CHIP C 1000PF J		
C19			CK73FB1E104K	CHIP C 0.10UF K		
C20			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C21			CC73FCH1H330J	CHIP C 33PF J		
C22, 23			CC73FCH1H120J	CHIP C 12PF J	YMCXIV	
C24, 25			CC73FCH1H150J	CHIP C 15PF J	YMCXIV	
C26			CE04KW1E470M	ELECTRO 47UF 25WV		
C27			CK73FB1E104K	CHIP C 0.10UF K		
C28			CC73FSL1H470J	CHIP C 47PF J		
C29			CC73FCH1H220J	CHIP C 22PF J		
C30-32			CK73FB1E104K	CHIP C 0.10UF K		
C33, 34			CC73FCH1H220J	CHIP C 22PF J		

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C35			CK73FB1H223KTA	CHIP C 0.022UF K		
C36			CK73FF1C224Z	CHIP C 0.22UF Z		
C37			CK73FB1H103K	CHIP C 0.010UF K		
C38			CE04KW1H2R2M	ELECTRO 2.2UF 50WV		
C39, 40			CK73FB1E104K	CHIP C 0.10UF K		
C41, 42			CC73FCH1H220J	CHIP C 22PF J		
C43			CK73FB1E104K	CHIP C 0.10UF K		
C44			CC73FSL1H470J	CHIP C 47PF J		
C45			CC73FSL1H221J	CHIP C 220PF J		
C46			CC73FSL1H470J	CHIP C 47PF J		
C50-52			CE04KW1C100M	ELECTRO 10UF 16WV		
C55			CC73FSL1H470J	CHIP C 47PF J		
C56			CE04KW0J471M	ELECTRO 470UF 6.3WV		
C57			CE04KW1A470M	ELECTRO 47UF 10WV		
C58, 59			CK73FB1H103K	CHIP C 0.010UF K		
C60, 61			CC73FSL1H221J	CHIP C 220PF J		
C83			CE04KW1C222M	ELECTRO 2200UF 16WV		
C84			CQ93FMG1H104J	MYLAR 0.10UF J		
C85, 86			CK73FB1E104K	CHIP C 0.10UF K		
C88			CE04KW1A101M	ELECTRO 100UF 10WV		
C89, 90			CK73FB1E104K	CHIP C 0.10UF K		
C92			CE04KW1A101M	ELECTRO 100UF 10WV		
C93-95			CK73FB1E104K	CHIP C 0.10UF K		
C101, 102			CC73FCH1H220J	CHIP C 22PF J		
C103, 104			CC73FSL1H101J	CHIP C 100PF J		
C107, 108			CC73FSL1H681J	CHIP C 680PF J		
C109, 110			CE04KW1H100M	ELECTRO 10UF 50WV		
C111, 112			CC73FSL1H182J	CHIP C 1800PF J		
C113, 114			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C115, 116			CK73FB1H152K	CHIP C 1500PF K		
C117, 118			CC73FSL1H681J	CHIP C 680PF J		
C123-126			CC73FSL1H101J	CHIP C 100PF J		
C128			CC73FSL1H101J	CHIP C 100PF J		
C131, 132			CK73FB1H822K	CHIP C 8200PF K		
C133, 134			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C135, 136			CK73FB1H272K	CHIP C 2700PF K		
C137, 138			CK73FB1H392K	CHIP C 3900PF K		
C141, 142			CC73FSL1H101J	CHIP C 100PF J		
C143, 144			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C145-148			CK73FB1H103K	CHIP C 0.010UF K		
C150			CK73FB1H103K	CHIP C 0.010UF K		
C151			CK73FB1E473KTA	CHIP C 0.047UF K		
C152			CK73FB1H822K	CHIP C 8200PF K		
C153, 154			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C155			CK73FB1E104K	CHIP C 0.10UF K		
C156			CK73FB1H272K	CHIP C 2700PF K		
C157			CK73FB1E104K	CHIP C 0.10UF K		
C158			CK73FB1H392K	CHIP C 3900PF K		
C161, 162			CC73FSL1H101J	CHIP C 100PF J		
C163, 164			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C165			CC73FSL1H102J	CHIP C 1000PF J		
C171-176			CC73FSL1H101J	CHIP C 100PF J		
C177, 178			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C182			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C185			CK73FB1H222K	CHIP C 2200PF K		

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PARTS LIST

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Ref. No	Add- ress	New Parts	Parts No.	Description	Desti- nation	Re- marks
C186, 187 C197 C198, 199 C200, 201 C202, 203		*	CC73FSL1H101J CC73FSL1H221J CK73FB1H822K CK73FB1H153KTA CK73FB1C334K	CHIP C 100PF J CHIP C 220PF J CHIP C 8200PF K CHIP C 0.015UF K CHIP C 0.33UF K		
C204, 205 C206 C207, 208 C209~212 C213~217			CE04KW1C100M CK73FB1H222K CE04KW1H100M CE04KW1V4R7M CC73FSL1H471J	ELECTRO 10UF 16VV CHIP C 2200PF K ELECTRO 10UF 50VV ELECTRO 4.7UF 35VV CHIP C 470PF J		
C219, 220 C251, 252 C253, 254 C255, 256 C257~260			CE04KW1H3R3M CC73FSL1H470J CC73FSL1H101J CC73FSL1H470J CC73FSL1H101J	ELECTRO 3.3UF 50VV CHIP C 47PF J CHIP C 100PF J CHIP C 47PF J CHIP C 100PF J	8 8 8 8 8	
C261 C262 C263 C264 C265			CK73FB1H103K CE04KW1HR33M CK73FB1H103K CE04KW1HR33M CK73FB1H103K	CHIP C 0.010UF K ELECTRO 0.33UF 50VV CHIP C 0.010UF K ELECTRO 0.33UF 50VV CHIP C 0.010UF K	8 8 8 8 8	
C266 C267 C272, 273 C274~277 C278, 279			CE04KW1HR33M CK73FB1H103K CE04KW1A101M CK73FB1E104K CE04KW1C470M	ELECTRO 0.33UF 50VV CHIP C 0.010UF K ELECTRO 100UF 10VV CHIP C 0.10UF K ELECTRO 47UF 16VV	8 8 8 8 8	
C280			CK73FB1H103K	CHIP C 0.010UF K	8	
CN1 CN2 CN3 CN3 J1	1C	*	E40-4908-05 E40-3259-05 E40-4248-05 E40-8358-05 E63-1080-05	FLAT CABLE CONNECTOR PIN ASSY PIN ASSY PIN ASSY PHONO JACK		
J2 J3 J4 J5 J6	1C 1C 1C 1C 1C	*	E63-0094-05 E63-0093-05 E11-0293-05 E56-0011-05 E56-0023-05	PHONO JACK PHONO JACK MINIATURE PHONE JACK(2P) CYLINDRICAL RECEPTACLE CYLINDRICAL RECEPTACLE	8 8	
L1 L2 L3 L4~6 X1		*	L40-4701-58 L79-1216-05 L92-0044-05 L79-1216-05 L77-2221-05	SMALL FIXED INDUCTOR(47UH,K) LINE FILTER FERRITE CORE LINE FILTER CRYSTAL RESONATOR(12.288MHZ)	8	
X1 X2			L77-2241-05 L77-2221-05	CRYSTAL RESONATOR(6.25MHZ) CRYSTAL RESONATOR(12.288MHZ)	67 67	
R1 R2 R3 R4~15 R16			RK73FB2A105J RK73FB2A102J RK73FB2A103J RK73FB2A221J RK73FB2A104J	CHIP R 1.0M J 1/10W CHIP R 1.0K J 1/10W CHIP R 10K J 1/10W CHIP R 220 J 1/10W CHIP R 100K J 1/10W	8	
R17, 18 R19 R20 R21 R22			RK73FB2A102J RK73FB2A221J RK73FB2A104J RK73FB2A221J RK73FB2A102J	CHIP R 1.0K J 1/10W CHIP R 220 J 1/10W CHIP R 100K J 1/10W CHIP R 220 J 1/10W CHIP R 1.0K J 1/10W	67 67	

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R23 R24 R25~27 R28 R29			RK73FB2A221J RK73FB2A221J RK73FB2A222J RK73FB2A105J RK73FB2A750J	CHIP R 220 J 1/10W CHIP R 220 J 1/10W CHIP R 2.2K J 1/10W CHIP R 1.0M J 1/10W CHIP R 75 J 1/10W	67	
R30 R31 R32 R33~36 R37			RK73FB2A472J RK73FB2A473J RK73FB2A472J RK73FB2A102J RK73FB2A302J	CHIP R 4.7K J 1/10W CHIP R 47K J 1/10W CHIP R 4.7K J 1/10W CHIP R 1.0K J 1/10W CHIP R 3.0K J 1/10W		
R38 R39 R40 R41 R42			RK73FB2A102J RK73FB2A222J RK73FB2A472J RK73FB2A473J RK73FB2A750J	CHIP R 1.0K J 1/10W CHIP R 2.2K J 1/10W CHIP R 4.7K J 1/10W CHIP R 47K J 1/10W CHIP R 75 J 1/10W		
R43~45 R46 R47, 48 R47, 48 R50			RK73FB2A221J RK73FB2A221J RK73FB2A101J RK73FB2A101J RK73FB2A750J	CHIP R 220 J 1/10W CHIP R 220 J 1/10W CHIP R 100 J 1/10W CHIP R 100 J 1/10W CHIP R 75 J 1/10W	8 KP YMCXI	
R51 R52, 53 R54 R55, 56 R57, 58			RK73FB2A332J RK73FB2A750J RK73FB2A332J RK73FB2A750J RS14KB3A391J	CHIP R 3.3K J 1/10W CHIP R 75 J 1/10W CHIP R 3.3K J 1/10W CHIP R 75 J 1/10W FL-PROOF RS 390 J 1W		
▲ R59, 60 ▲ R61 ▲ R62 ▲ R64 ▲ R66			RS14KB3A101J RS14KB3A390J RS14KB3A271J RD14NB2E1R0J RD14NB2E2R2J	FL-PROOF RS 100 J 1W FL-PROOF RS 39 J 1W FL-PROOF RS 270 J 1W RD 1 J 1/4W RD 2.2 J 1/4W	8	
▲ R67 ▲ R68 ▲ R69 R70 R71			RD14NB2E1R0J RD14NB2E2R2J RK73FB2A203J RK73FB2A101J RK73FB2A473J	RD 1 J 1/4W RD 2.2 J 1/4W CHIP R 20K J 1/10W CHIP R 100 J 1/10W CHIP R 47K J 1/10W		
R72 R101~104 R105, 106 R107, 108 R111, 112			RK73FB2A472J RK73FB2A203J RK73FB2A101J RK73FB2A102J RK73FB2A362J	CHIP R 4.7K J 1/10W CHIP R 20K J 1/10W CHIP R 100 J 1/10W CHIP R 1.0K J 1/10W CHIP R 3.6K J 1/10W		
R113, 114 R115~118 R119, 120 R121, 122 R123, 124			RK73FB2A104J RK73FB2A332J RK73FB2A113J RK73FB2A512J RK73FB2A221J	CHIP R 100K J 1/10W CHIP R 3.3K J 1/10W CHIP R 11K J 1/10W CHIP R 5.1K J 1/10W CHIP R 220 J 1/10W		
R131, 132 R133, 134 R135, 136 R137, 138 R139, 140			RK73FB2A132J RK73FB2A104J RK73FB2A122J RK73FB2A821J RK73FB2A113J	CHIP R 1.3K J 1/10W CHIP R 100K J 1/10W CHIP R 1.2K J 1/10W CHIP R 820 J 1/10W CHIP R 11K J 1/10W		
R141, 142 R143, 144 R151 R152 R153, 154			RK73FB2A203J RK73FB2A101J RK73FB2A472J RK73FB2A132J RK73FB2A104J	CHIP R 20K J 1/10W CHIP R 100 J 1/10W CHIP R 4.7K J 1/10W CHIP R 1.3K J 1/10W CHIP R 100K J 1/10W		

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R155			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R156			RK73FB2A122J	CHIP R 1.2K J 1/10W		
R157			RK73FB2A472J	CHIP R 4.7K J 1/10W		
R158			RK73FB2A821J	CHIP R 820 J 1/10W		
R159			RK73FB2A432J	CHIP R 4.3K J 1/10W		
R160			RK73FB2A113J	CHIP R 11K J 1/10W		
R161			RK73FB2A183J	CHIP R 18K J 1/10W		
R162			RK73FB2A203J	CHIP R 20K J 1/10W		
R163, 164			RK73FB2A101J	CHIP R 100 J 1/10W		
R165			RK73FB2A332J	CHIP R 3.3K J 1/10W		
R166			RK73FB2A122J	CHIP R 1.2K J 1/10W		
R167~172			RK73FB2A103J	CHIP R 10K J 1/10W		
R173, 174			RK73FB2A133J	CHIP R 13K J 1/10W		
R175, 176			RK73FB2A113J	CHIP R 11K J 1/10W		
R177, 178			RK73FB2A101J	CHIP R 100 J 1/10W		
R179, 180			RK73FB2A224J	CHIP R 220K J 1/10W		
R181			RK73FB2A751J	CHIP R 750 J 1/10W		
R182			RK73FB2A272J	CHIP R 2.7K J 1/10W		
R183, 184			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R186			RK73FB2A100J	CHIP R 10 J 1/10W		
R189~191			RK73FB2A102J	CHIP R 1.0K J 1/10W		
R193~198			RK73FB2A101J	CHIP R 100 J 1/10W		
R199			RS14KB3A221J	FL-PROOF RS 220 J 1W		
R200			RS14KB3A271J	FL-PROOF RS 270 J 1W		
R201			RK73FB2A100J	CHIP R 10 J 1/10W		
R203, 204			RK73FB2A100J	CHIP R 10 J 1/10W		
R207, 208			RK73FB2A100J	CHIP R 10 J 1/10W		
R251, 252			RK73FB2A750J	CHIP R 75 J 1/10W		
R253, 254			RK73FB2A332J	CHIP R 3.3K J 1/10W		
R255~258			RK73FB2A750J	CHIP R 75 J 1/10W		
R259, 260			RK73FB2A332J	CHIP R 3.3K J 1/10W		
R261~264			RK73FB2A750J	CHIP R 75 J 1/10W		
S1	1C		S62-0034-05	SLIDE SWITCH		
D1, 2			DA204U	DIODE		
D1, 2			1SS302	DIODE		
D3, 4			UDZ5.1B	ZENER DIODE		
D5		*	S1ZB20(4072)	DIODE		
D6~8			UDZ6.2B	ZENER DIODE		
D9, 10			UDZ6.8B	ZENER DIODE		
D11, 12			UDZ13B	ZENER DIODE		
IC1		*	YSS902	MOS-IC		
IC1		*	YSS912	MOS-IC		
IC2			CS4226KQG	MOS-IC		
IC3			TC74HCU04AF	IC(HEX INVERTER SMD)		
IC4			NJM2279M	ANALOGUE IC		
IC5			TC9162AF	MOS-IC		
IC6~10			NJM4565M	ANALOGUE IC		
IC11			M62446FP	ANALOGUE IC		
IC12			TA7805S	ANALOGUE IC		
IC13			TA7805SB	ANALOGUE IC		
IC14			L88M33T	ANALOGUE IC		
IC15			TC7W241FU	MOS-IC		
IC16, 17			NJM2279M	ANALOGUE IC		

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IC18			L78M05T	MOS-IC (5.0V 0.5A REG)		
IC19		*	L79M05T	MOS-IC		
Q1			2SC4081(R,S)	TRANSISTOR		
Q2			2SD1819A(Q,R)	TRANSISTOR		
Q2			2SA1576A(R,S)	TRANSISTOR		
Q2			2SB1218A(Q,R)	TRANSISTOR		
A1	1C		W02-1181-05	OPTIC RECEIVING MODULE		
AUDIO (X09-6160/X09-6342)						
D500~502		*	B30-2545-05	LED(RED3(160))		
D527		*	B30-2545-05	LED(RED3(160))		
C1, 2			CK45FF1H103Z	CERAMIC 0.010UF Z		
C3			C91-1480-05	MP 0.22UF 250WV		
C5, 6		*	C90-3832-05	ELECTRO 4700UF 75WV		
C7, 8		*	C90-3834-05	ELECTRO 3300UF 42WV		
C9		*	CE04KW1V222M	ELECTRO 2200UF 35WV		
C10			CE04KW1V471M	ELECTRO 470UF 35WV		
C11~14			CK73FF1C224Z	CHIP C 0.22UF Z		
C15, 16			CE04KW1E101M	ELECTRO 100UF 25WV		
C18			CE04KW1J220M	ELECTRO 22UF 63WV		
C19			CE04KW1V470M	ELECTRO 47UF 35WV		
C21, 22			CE04KW1H470M	ELECTRO 47UF 50WV		
C23~26			CE04KW2A100M	ELECTRO 10UF 100WV		
C29, 30			CE04KW1H470M	ELECTRO 47UF 50WV		
C31, 32			CE04KW2A100M	ELECTRO 10UF 100WV		
C33, 34			CK45FB2H392K	CERAMIC 3900PF K		
C35			CE04KW0J221M	ELECTRO 220UF 6.3WV		
C36			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C37			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C38			CE04HW1E100M	NP-ELEC 10UF 25WV		
C39, 40			CK45FB2H392K	CERAMIC 3900PF K		
C41			CE04KW1A101M	ELECTRO 100UF 10WV		
C42			CE04KW1C330M	ELECTRO 33UF 16WV		
C43			CE04KW1H010M	ELECTRO 1.0UF 50WV		
C101, 102			CC73FSL1H390J	CHIP C 39PF J		
C103, 104			CE04KW1H100M	ELECTRO 10UF 50WV		
C105, 106			CC73FSL1H221J	CHIP C 220PF J		
C107, 108			CE04KW1A470M	ELECTRO 47UF 10WV		
C109, 110			CC45FSL1H101J	CERAMIC 100PF J		
C111, 112			CQ93FMG1H123J	MYLAR 0.012UF J		
C113, 114			CK45FB1H332K	CERAMIC 3300PF K		
C115, 116			CE04KW1V4R7M	ELECTRO 4.7UF 35WV		
C117			CC45FSL1H101J	CERAMIC 100PF J		
C118			CK45FF1H103Z	CERAMIC 0.010UF Z		
C119, 120			CC73FSL1H221J	CHIP C 220PF J		
C121, 122			CC73FSL1H151J	CHIP C 150PF J		
C123, 124			CC73FSL1H221J	CHIP C 220PF J		
C127, 128			CC73FSL1H221J	CHIP C 220PF J		
C131, 132			CC73FSL1H221J	CHIP C 220PF J		
C135, 136			CC73FSL1H221J	CHIP C 220PF J		
C139, 140			CC73FSL1H221J	CHIP C 220PF J		
C143, 144			CC73FSL1H221J	CHIP C 220PF J		
C147, 148			CC73FSL1H221J	CHIP C 220PF J		
C151, 152			CC73FSL1H221J	CHIP C 220PF J		

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C155, 156 C157~162 C163, 164 C165 C166~168			CE04KW1H2R2M CC73FSL1H101J CE04KW1C220M CC45FSL1H101J CK45FF1H103Z	ELECTRO 2.2UF 50WV CHIP C 100PF J ELECTRO 22UF 16WV CERAMIC 100PF J CERAMIC 0.010UF Z		
C169, 170 C171, 172 C173, 174 C175~180 C181, 182			CC73FSL1H221J CK45FF1H103Z CE04KW1H2R2M CC73FSL1H101J CE04KW1C220M	CHIP C 220PF J CERAMIC 0.010UF Z ELECTRO 2.2UF 50WV CHIP C 100PF J ELECTRO 22UF 16WV		
C201, 202 C229, 230 C233, 234 C237 C238			CE04KW1H100M CC73FSL1H471J CC73FSL1H101J CC45FSL1H101J CK45FF1H103Z	ELECTRO 10UF 50WV CHIP C 470PF J CHIP C 100PF J CERAMIC 100PF J CERAMIC 0.010UF Z		
C241, 242 C245~252 C253, 254 C257, 258 C263, 264			CC73FSL1H471J CC73FSL1H101J CC73FSL1H471J CC73FSL1H101J CC73FSL1H101J	CHIP C 470PF J CHIP C 100PF J CHIP C 470PF J CHIP C 100PF J CHIP C 100PF J		
C265, 266 C267, 268 C269, 270 C271, 272 C273, 274			CE04KW1H2R2M CE04KW1A101M CC73FSL1H101J CE04KW1H2R2M CE04KW1A101M	ELECTRO 2.2UF 50WV ELECTRO 100UF 10WV CHIP C 100PF J ELECTRO 2.2UF 50WV ELECTRO 100UF 10WV		
C277 C278 C279 C280 C281~285			CE04KW1H2R2M CK73FF1C224Z CE04KW1A101M CK73FF1C224Z CC45FCH1H220J	ELECTRO 2.2UF 50WV CHIP C 0.22UF Z ELECTRO 100UF 10WV CHIP C 0.22UF Z CERAMIC 22PF J		
C286 C287, 288 C289~292 C293, 294 C295~298			CE04KW1V4R7M CK73FB1H102K CK73FF1C224Z CK73FB1H102K CK73FF1C224Z	ELECTRO 4.7UF 35WV CHIP C 1000PF K CHIP C 0.22UF Z CHIP C 1000PF K CHIP C 0.22UF Z		
C299 C301~305 C306 C307, 308 C309~311			CK73FB1H102K CC73FSL1H100D CC73FSL1H101J CC45FSL1H101J CK45FF1H472Z	CHIP C 1000PF K CHIP C 10PF D CHIP C 100PF J CERAMIC 100PF J CERAMIC 4700PF Z		
C313~316 C321~328 C329~333 C334 C335			CK45FF1H472Z CE04KW1H100M CE04KW1C220M CE04KW1C470M CE04KW1H101M	CERAMIC 4700PF Z ELECTRO 10UF 50WV ELECTRO 22UF 16WV ELECTRO 47UF 16WV ELECTRO 100UF 50WV	YMXI	
C501 C502 C503 C504 C505			CK45FF1H103Z CQ93FMG1H104J CK45FF1H103Z CK73FB1H103K CK45FF1H103Z	CERAMIC 0.010UF Z MYLAR 0.10UF J CERAMIC 0.010UF Z CHIP C 0.010UF K CERAMIC 0.010UF Z		
C506 C507 C508 C509 C511			CK45FB1H102K CK45FF1H103Z CE04DWOJ102M CE04KW1A101M CK45FF1H103Z	CERAMIC 1000PF K CERAMIC 0.010UF Z ELECTRO 1000UF 6.3WV ELECTRO 100UF 10WV CERAMIC 0.010UF Z		

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C512~514 C517 C518 C519, 520 C521			CK73FB1H103K CE04KW1H010M CK45FF1H103Z CK73FB1H103K CK45FF1H103Z	CHIP C 0.010UF K ELECTRO 1.0UF 50WV CERAMIC 0.010UF Z CHIP C 0.010UF K CERAMIC 0.010UF Z		
C525 C526 C529, 530 C531 C532			CE04KW1H010M C90-3214-05 CE04KW1V4R7M CK73FB1H103K CK73FB1H102K	ELECTRO 1.0UF 50WV ELECTRO 100UF 6.3WV ELECTRO 4.7UF 35WV CHIP C 0.010UF K CHIP C 1000PF K		
C534 C535			C90-1827-05 CE04KW0J471M	ELECTRO 0.047F 5.5WV ELECTRO 470UF 6.3WV	YMCXIV KP	
CN1 CN1 CN8 CN9 CN11		*	E40-4299-05 E40-8364-05 E40-8251-05 E40-9848-05 E40-8253-05	PIN ASSY PIN ASSY FLAT CABLE CONNECTOR PIN ASSY FLAT CABLE CONNECTOR		
CN12 CN13 CN13 CN51 CN52		*	E40-8196-05 E40-4248-05 E40-8358-05 E40-8252-05 E40-8405-05	PIN ASSY PIN ASSY PIN ASSY FLAT CABLE CONNECTOR FLAT CABLE CONNECTOR		
CN53 J1 J1 J1 J2, 3		2C 2C 2C 2C	E40-8250-05 E63-0046-15 E63-0046-15 E63-0172-05 E63-0047-15	FLAT CABLE CONNECTOR PHONO JACK PHONO JACK PHONO JACK PHONO JACK	KP YMCXI V KP	
J2, 3 J2, 3 J4 J4 J4		2C 2C 2C 2C 2C	E63-0047-15 E63-0173-05 E63-0116-05 E63-0116-05 E63-0164-05	PHONO JACK PHONO JACK PHONO JACK PHONO JACK PHONO JACK	YMCXI V KP YMCXI KP	
J4 J4 J5 J5 J5		2C 2C 2C 2C 2C	E63-0164-05 E63-1016-05 E70-0089-05 E70-0100-05 E70-0100-05	PHONO JACK PHONO JACK SCREW TERMINAL BOARD SCREW TERMINAL BOARD SCREW TERMINAL BOARD	YMCXI V V KP YMCXI	
J6 J6 J6 J7 J7		2C 2C 2C 2C 2C	E70-0047-05 E70-0047-05 E70-0068-05 E63-0046-15 E63-0046-15	LOCK TERMINAL BOARD LOCK TERMINAL BOARD LOCK TERMINAL BOARD PHONO JACK PHONO JACK	KP YMCXI V KP YMCXI	
J7 W401~405 W401~405		2C	E63-0172-05 E29-1634-14 E29-1634-14	PHONO JACK LEAD PLATE LEAD PLATE	V KP YMCXI	
-			J19-5928-03	HOLDER		
L1~5 X501			L39-1373-05 L78-0290-05	PHASE COMPENSATION COIL RESONATOR (8MHZ)		
R1, 2 R3, 4 R5 R6 R8			RK73FB2A513J RK73FB2A273J RK73FB2A222J RK73FB2A333J RK73FB2A152J	CHIP R 51K J 1/10W CHIP R 27K J 1/10W CHIP R 2.2K J 1/10W CHIP R 33K J 1/10W CHIP R 1.5K J 1/10W	YMXI	

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KRF-V7020DN/8020DN/R-307/309/357

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R9, 10 R11, 12 R14 R16, 17 R18			RS14KB3D391J RK73FB2A472J RD14NB2E1R0J RK73FB2A273J RD14NB2E4R7J	FL-PROOF RS 390 CHIP R 4.7K J 1/10W RD 1 J 1/4W CHIP R 27K J 1/10W RD 4.7 J 1/4W		
R19 R21, 22 R23, 24 R25, 26 R27, 28			RK73FB2A472J RS14KB3A392J RD14NB2E103J RS14KB3A392J RK73FB2A272J	CHIP R 4.7K J 1/10W FL-PROOF RS 3.9K J 1W RD 10K J 1/4W FL-PROOF RS 3.9K J 1W CHIP R 2.7K J 1/10W		
R30 R32 R34 R35 R37			RK73FB2A223J RK73FB2A153J RK73FB2A473J RK73FB2A272J RS14KB3A681J	CHIP R 22K J 1/10W CHIP R 15K J 1/10W CHIP R 47K J 1/10W CHIP R 2.7K J 1/10W FL-PROOF RS 680 J 1W		
R41 R43, 44 R45 R46 R47			RK73FB2A474J RK73FB2A1R0J RD14NB2E1R0J RD14BB2C470J RK73FB2A103J	CHIP R 470K J 1/10W CHIP R 1 J 1/10W RD 1 J 1/4W RD 47 J 1/6W CHIP R 10K J 1/10W		
R50 R51 R101, 102 R103, 104 R105, 106			RK73FB2A472J RK73FB2A473J RK73FB2A102J RK73FB2A273J RK73FB2A101J	CHIP R 4.7K J 1/10W CHIP R 47K J 1/10W CHIP R 1.0K J 1/10W CHIP R 27K J 1/10W CHIP R 100 J 1/10W		
R117, 118 R119, 120 R121, 122 R123, 124 R125, 126			RK73FB2A102J RK73FB2A224J RK73FB2A102J RK73FB2A224J RK73FB2A102J	CHIP R 1.0K J 1/10W CHIP R 220K J 1/10W CHIP R 1.0K J 1/10W CHIP R 220K J 1/10W CHIP R 1.0K J 1/10W		
R127, 128 R129, 130 R131, 132 R135, 136 R137, 138			RK73FB2A224J RK73FB2A102J RK73FB2A224J RK73FB2A102J RK73FB2A224J	CHIP R 220K J 1/10W CHIP R 1.0K J 1/10W CHIP R 220K J 1/10W CHIP R 1.0K J 1/10W CHIP R 220K J 1/10W		
R139, 140 R141, 142 R143, 144 R145, 146 R147, 148			RK73FB2A102J RK73FB2A224J RK73FB2A102J RK73FB2A224J RK73FB2A102J	CHIP R 1.0K J 1/10W CHIP R 220K J 1/10W CHIP R 1.0K J 1/10W CHIP R 220K J 1/10W CHIP R 1.0K J 1/10W		
R149, 150 R151, 152 R153~156 R157, 158 R169~172			RK73FB2A224J RK73FB2A102J RK73FB2A224J RK73FB2A4R7J RK73FB2A223J	CHIP R 220K J 1/10W CHIP R 1.0K J 1/10W CHIP R 220K J 1/10W CHIP R 4.7 J 1/10W CHIP R 22K J 1/10W		
R173, 174 R175, 176 R177, 178 R201~204 R206			RK73FB2A473J RK73FB2A224J RK73FB2A4R7J RK73FB2A202J RK73FB2A103J	CHIP R 47K J 1/10W CHIP R 220K J 1/10W CHIP R 4.7 J 1/10W CHIP R 2.0K J 1/10W CHIP R 10K J 1/10W		
R226 R227, 228 R229, 230 R231, 232 R238			RK73FB2A103J RK73FB2A183J RK73FB2A224J RK73FB2A183J RK73FB2A103J	CHIP R 10K J 1/10W CHIP R 18K J 1/10W CHIP R 220K J 1/10W CHIP R 18K J 1/10W CHIP R 10K J 1/10W		

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R239, 240 R241, 242 R243, 244 R250 R251, 252			RK73FB2A183J RK73FB2A224J RK73FB2A183J RK73FB2A103J RK73FB2A183J	CHIP R 18K J 1/10W CHIP R 220K J 1/10W CHIP R 18K J 1/10W CHIP R 10K J 1/10W CHIP R 18K J 1/10W		
R253 R254 R255, 256 R263, 264 R267~270			RK73FB2A224J RK73FB2A822J RK73FB2A183J RK73FB2A102J RK73FB2A102J	CHIP R 220K J 1/10W CHIP R 8.2K J 1/10W CHIP R 18K J 1/10W CHIP R 1.0K J 1/10W CHIP R 1.0K J 1/10W		
R271 R272 R273 R274 R275, 276			RK73FB2A473J RK73FB2A361J RK73FB2A102J RK73FB2A101J RK73FB2A104J	CHIP R 47K J 1/10W CHIP R 360 J 1/10W CHIP R 1.0K J 1/10W CHIP R 100 J 1/10W CHIP R 100K J 1/10W		
R277, 278 R283, 284 R285, 286 R291 R293			RK73FB2A563J RK73FB2A182J RK73FB2A563J RK73FB2A182J RK73FB2A563J	CHIP R 56K J 1/10W CHIP R 1.8K J 1/10W CHIP R 56K J 1/10W CHIP R 1.8K J 1/10W CHIP R 56K J 1/10W		
R310 R311, 312 R313, 314 R315, 316 R317, 318			RK73FB2A333J R92-1866-05 RK73FB2A303J RK73FB2A243J RK73FB2A471J	CHIP R 33K J 1/10W METAL FILM 0.1 2W CHIP R 30K J 1/10W CHIP R 24K J 1/10W CHIP R 470 J 1/10W		
R319, 320 R323, 324 R325, 326 R327, 328 R329, 330			RK73FB2A333J RS14KB3D4R7J R92-1866-05 RK73FB2A303J RK73FB2A243J	CHIP R 33K J 1/10W FL-PROOF RS 4.7 J 2W METAL FILM 0.1 2W CHIP R 30K J 1/10W CHIP R 24K J 1/10W		
R331, 332 R333, 334 R337, 338 R339 R341			RK73FB2A471J RK73FB2A333J RS14KB3D4R7J R92-1866-05 RS14KB3D4R7J	CHIP R 470 J 1/10W CHIP R 33K J 1/10W FL-PROOF RS 4.7 J 2W METAL FILM 0.1 2W FL-PROOF RS 4.7 J 2W		
R347, 348 R349 R350 R351, 352 R353			RK73FB2A102J RK73FB2A223J RK73FB2A103J RD14NB2E4R7J RK73FB2A103J	CHIP R 1.0K J 1/10W CHIP R 22K J 1/10W CHIP R 10K J 1/10W RD 4.7 J 1/4W CHIP R 10K J 1/10W		
R354 R355 R356, 357 R361 R363			RK73FB2A223J RK73FB2A473J RK73FB2A104J RK73FB2A303J RK73FB2A243J	CHIP R 22K J 1/10W CHIP R 47K J 1/10W CHIP R 100K J 1/10W CHIP R 30K J 1/10W CHIP R 24K J 1/10W		
R365 R367~371 R372 R384 R385			RK73FB2A471J RK73FB2A182J RK73FB2A621J RK73FB2A103J RK73FB2A513J	CHIP R 470 J 1/10W CHIP R 1.8K J 1/10W CHIP R 620 J 1/10W CHIP R 10K J 1/10W CHIP R 51K J 1/10W	YMXI YMXI	
R386 R387 R521 R522 R534			RK73FB2A103J RK73FB2A472J RK73FB2A103J RD14NB2E1R0J RK73FB2A101J	CHIP R 10K J 1/10W CHIP R 4.7K J 1/10W CHIP R 10K J 1/10W RD 1 J 1/4W CHIP R 100 J 1/10W	YMXI YMXI	

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R536 R539 R542 R549 R562		*	RK73FB2A471J RK73FB2A471J RK73EB2B511J RK73FB2A102J RK73FB2A102J	CHIP R 470 J 1/10W CHIP R 470 J 1/10W CHIP R 510 J 1/8W CHIP R 1.0K J 1/10W CHIP R 1.0K J 1/10W		
R578 R587 R592 R605-607 W503			RK73FB2A103J RK73FB2A103J RK73FB2A102J RK73FB2A103J R92-0670-05	CHIP R 10K J 1/10W CHIP R 10K J 1/10W CHIP R 1.0K J 1/10W CHIP R 10K J 1/10W CHIP R 0 OHM		
K1-4 S501-507 S509-512 S514-516 S520, 521	2A, 2B 2A, 2B 2A, 2B 2A		S76-0076-05 S70-0031-05 S70-0031-05 S70-0031-05 S70-0031-05	MAGNETIC RELAY TACT SWITCH TACT SWITCH TACT SWITCH TACT SWITCH		
S517 S518, 519	2B 2B		T99-0602-05 T99-0605-05	ROTARY ENCODER ROTARY ENCODER		
Δ D1 Δ D2 Δ D3 Δ D4 Δ D8, 9		*	D4SBL20UF03 D4SBL20UF03 S1ZB20(4101) D4SBL20UF03 HZS16N(B2)	DIODE DIODE DIODE DIODE ZENER DIODE	YMCXIV KP	
D8, 9 D11-14 D11-14 D15 D16, 17			MTZJ16(B) HZS8.2N(B2) MTZJ8.2(B) MA111 HSS104A	ZENER DIODE ZENER DIODE ZENER DIODE DIODE DIODE		
D16, 17 D18 D18 D19 D19			1SS133 HZS4.7N(B2) MTZJ4.7(B) HZS3.3N(B2) MTZJ3.3(B)	DIODE ZENER DIODE ZENER DIODE ZENER DIODE ZENER DIODE		
D20-23 D26, 27 D28 D30 D31, 32			MA111 MA111 MA111 MA111 HZS30N(B2)	DIODE DIODE DIODE DIODE ZENER DIODE	YMXI YMXI YMXI	
D31, 32 D33 D503 D503 D504			MTZJ30(B) MA111 HSS104A 1SS133 HSS104A	ZENER DIODE DIODE DIODE DIODE DIODE	YMXI YMXI 8 X	
D504 D508, 509 D508, 509 D510 D510			1SS133 HSS104A 1SS133 HSS104A 1SS133	DIODE DIODE DIODE DIODE DIODE	X	
D511-522 D511-522 D525 D525 D526			HSS104A 1SS133 HZS6.2N(B2) MTZJ6.2(B) HSS104A	DIODE DIODE ZENER DIODE ZENER DIODE DIODE		YMCXIV YMCXIV
D526 D529-531			1SS133 HSS104A	DIODE DIODE		

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Δ D529-531 Δ ED51 Δ IC1 Δ IC2 Δ IC3		*	1SS133 11-MT-120GK TA7815S TA79015S STK411-230D	DIODE INDICATOR TUBE IC(VOLTAGE REGULATOR/ +15V) IC(VOLTAGE REGULATOR/~15V) HYBRID IC		
Δ IC3 Δ IC4 Δ IC5 Δ IC6 Δ IC7			STK411-230K STK410-030D NJM4580ED TC9164AF TC9163AF	HYBRID IC HYBRID IC ANALOGUE IC MOS-IC MOS-IC		
Δ IC8-12 Δ IC51 Δ IC53 Δ Q1 Δ Q2		*	NJM4565MD CXP82852-139Q S-80740AL-A4 2SC1845(F,E) 2SB1640	IC(OP AMP X2) MI-COM IC IC(VOLTAGE DETECTOR) TRANSISTOR TRANSISTOR		
Δ Q3-14 Δ Q15, 16 Δ Q17-21 Δ Q22 Δ Q23			2SC2878(B) 2SA1576A(R,S) 2SC1845(F,E) 2SA1576A(R,S) 2SA992(F,E)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Δ Q24, 25 Δ Q26-29 Δ Q31 Δ Q32 Δ Q32			2SC1845(F,E) DTC123JUA 2SC3944A(R,S) 2SA1123(S,T) 2SA1285A(F)	TRANSISTOR DIGITAL TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR		
Q34, 35 Q36 Q37 Q38 Q40			2SC1845(F,E) 2SA1535A(R,S) 2SC1845(F,E) 2SC3722K(R,S) 2SC4213(B)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	YMXI	
Q41 Q41 Q43, 44 Q501 Q501			2SC4081(R,S) 2SD1819A(Q,R) 2SC2878(B) 2SC4081(R,S) 2SD1819A(Q,R)	TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR TRANSISTOR	YMXI YMXI	
Q503 Q503 TH1			2SC4081(R,S) 2SD1819A(Q,R) PTH9C42BD471Q	TRANSISTOR TRANSISTOR POSITIVE RESISTOR	YMXI	
A501	2B		W02-2625-05	OPTIC RECEIVING MODULE		

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HOW TO READ THE PARTS LIST

Destination column has the abbreviation for the sale country and model. Alphabets mean the

country. Numerals do the model.

Example: X7 shows KRF-V7020D for Australia market. "X" does all models for Australia.

"7" does KRF-V7020D and VR-357.

ABBREVIATION OF MODEL AND MASS PRODUCTION'S DESTINATIONS

MODEL	CNT ABB.	Australia X	Canada P	China C	England T	Europe E	Germany G	Korea H	Malaysia I
KRF-V7020D	7	X7	-	C7	-	-	-	-	-
KRF-V8020D	8	X8	-	C8	-	-	-	-	I8
VR-307	6	-	P6	-	-	-	-	-	-
VR-357	7	-	P7	-	-	-	-	-	-
VR-309	8	-	P8	-	-	-	-	-	-
MODEL	CNT ABB.	Mexico R	PX/IAAFES Y	Russia R	Scandinavia L	Shanghai V	USA K	Other area M	
KRF-V7020D	7	-	Y7	-	-	V7	-	M7	-
KRF-V8020D	8	-	Y8	-	-	-	-	M8	-
VR-307	6	-	-	-	-	-	K6	-	-
VR-357	7	-	-	-	-	-	K7	-	-
VR-309	8	-	-	-	-	-	K8	-	-

PARTS LIST

KRF-V7020D/V8020D/VR-307/309/357

KRF-V7020D/V8020D/VR-307/309/357

SPECIFICATIONS

For other countries

AUDIO section

Effective power output during STEREO operation

KRF-V8020D

1kHz, 10% T.H.D., at 8 Ω 140 W + 140 W

Rated power output during STEREO operation

100 watts per channel minimum RMS, both channels driven, at 8 Ω from 40 Hz to 20 kHz with no more than 0.7% total harmonic distortion.(FTC)
--

Effective power output during SURROUND operation

FRONT (1kHz, 10% T.H.D. at 8 Ω one channel driven)

..... 100 W + 100 W

CENTER (1kHz, 10% T.H.D. at 8 Ω one channel driven)

..... 100 W

SURROUND (1kHz, 10% T.H.D. at 8 Ω one channel driven)

..... 100 W + 100 W

Total harmonic distortion 0.03% (1 kHz, 50W, 8 Ω)

Frequency response

CD 10 Hz ~ 85kHz, +0 dB, -3.0 dB

Signal to noise ratio (IHF'66)

PHONO (MM) 75 dB

CD 93 dB

Input sensitivity / impedance

PHONO (MM) 2.5 mV / 27 k Ω

CD 200 mV / 47 k Ω

Output level / impedance

TAPE REC 200 mV / 2.2 k Ω

PRE OUT (SUBWOOFER) 2 V / 2.2 k Ω

Tone control

BASS ± 10 dB (at 100 Hz)

TREBLE ± 10 dB (at 10 kHz)

DIGITAL AUDIO section

Sampling frequency 32 kHz, 44.1 kHz, 48 kHz

Input level / impedance / wave length

Optical -15 dBm ~ -21 dBm, 600 nm ± 30 nm

Coaxial 0.5 Vp-p / 75 Ω

VIDEO section

VIDEO inputs/outputs

VIDEO (composite) 1 Vp-p / 75 Ω

S VIDEO (luminance signal) 1 Vp-p / 75 Ω

(chrominance signal) 0.286 Vp-p / 75 Ω

FM tuner section

Tuning frequency range 87.5 MHz ~ 108 MHz

Usable sensitivity (MONO)

..... 1.6 μ V (75 Ω) / 15.2 dBf (75 kHz DEV., SINAD 30 dB)

50dB quieting sensitivity

STEREO 31.6 μ V (75 Ω) / 41.2 dBf

Total harmonic distortion (1 kHz)

MONO 0.6% (65 dBf input)

STEREO 0.7% (65 dBf input)

Signal to noise ratio (1 kHz, 75 kHz DEV.)

MONO 75 dB (65 dBf input)

STEREO 68 dB (65 dBf input)

Stereo separation (1 kHz) 38 dB

Selectivity (± 400 kHz) 50 dB

Frequency response 30 Hz ~ 15kHz, +0.5 dB, -3.0 dB

AM tuner section

Tuning frequency range

9 kHz step 531 kHz ~ 1,602 kHz

10 kHz step 530 kHz ~ 1,610 kHz

Usable sensitivity (30% mod., S/N 20 dB)

..... 16 μ V / (600 μ V/m)

Signal to noise ratio (30% mod. 1 mV input) 50 dB

GENERAL

Power consumption

For U.S. military, Australia, Malaysia 240 W

For other countries 230 W

AC outlet

SWITCHED 2 (total 150 W max.)

Dimensions W : 440 mm

H : 144 mm

D : 400 mm

Weight (Net) 8.6 kg

Notes

1. KENWOOD follows a policy of continuous advancements in development. For this reason specifications may be changed without notice.

2. The full performance may not be exhibited in an extremely cold location (under a water-freezing temperature).

KRF-V7020D/V8020D/VR-307/309/357

SPECIFICATIONS

For U.S.A and Canada

AUDIO section

Rated power output during STEREO operation

100 watts per channel minimum RMS, both channels driven, at 8 Ω from 40 Hz to 20 kHz with no more than 0.7% total harmonic distortion.(FTC)

Effective power output during SURROUND operation
FRONT (1kHz, 0.7% T.H.D. at 8 Ω one channel driven) 100 W + 100 W
CENTER (1kHz, 0.7% T.H.D. at 8 Ω one channel driven) 100 W
SURROUND (1kHz, 0.7% T.H.D. at 8 Ω one channel driven) 100 W + 100 W

Total harmonic distortion 0.03% (1 kHz, 50W, 8 Ω)
Frequency response
CD 10 Hz ~ 85kHz, +0 dB, -3.0 dB
Signal to noise ratio (IHF'66)
PHONO (MM) 75 dB
CD 93 dB
Input sensitivity / impedance
PHONO (MM) 2.5 mV / 27 k Ω
CD 200 mV / 47 k Ω
Output level / impedance
TAPE REC 200 mV / 2.2 k Ω
PRE OUT (SUBWOOFER) 2 V / 2.2 k Ω
Tone control
BASS ± 10 dB (at 100 Hz)
TREBLE ± 10 dB (at 10 kHz)

DIGITAL AUDIO section

Sampling frequency 32 kHz, 44.1 kHz, 48 kHz
Input level / impedance / wave length
Optical -15 dBm ~ -21 dBm, 600 nm ± 30 nm
Coaxial 0.5 Vp-p / 75 Ω

VIDEO section

VIDEO inputs/outputs

VIDEO (composite) 1 Vp-p / 75 Ω
SVIDEO (luminance signal) 1 Vp-p / 75 Ω
(chrominance signal) 0.286 Vp-p / 75 Ω

FM tuner section

Tuning frequency range 87.5 MHz ~ 108 MHz
Usable sensitivity (MONO)
..... 1.6 μ V (75 Ω) / 15.2 dBf (75 kHz DEV., SINAD 30 dB)
50dB quieting sensitivity
STEREO 31.6 μ V (75 Ω) / 41.2 dBf
Total harmonic distortion (1 kHz)
MONO 0.6% (65 dBf input)
STEREO 0.7% (65 dBf input)
Signal to noise ratio (1 kHz, 75 kHz DEV.)
MONO 75 dB (65 dBf input)
STEREO 68 dB (65 dBf input)
Stereo separation (1 kHz) 38 dB
Selectivity (± 400 kHz) 50 dB
Frequency response 30 Hz ~ 15kHz, +0.5 dB, -3.0 dB

AM tuner section

Tuning frequency range
10 kHz step 530 kHz ~ 1,700 kHz
Usable sensitivity (30% mod., S/N 20 dB)
..... 16 μ V / (600 μ V/m)
Signal to noise ratio (30% mod. 1 mV input) 50 dB

GENERAL

Power consumption 2.6 A
AC outlet
SWITCHED 2 (total 150 W, 1.25 A max.)
Dimensions W : 440 mm (17-5/16")
H : 144 mm (5-11/16")
D : 400 mm (15-3/4")
Weight (Net) 8.6 kg (19.0 lb)

Notes

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2. The full performance may not be exhibited in an extremely cold location (under a water-freezing temperature).

Note:

Component and circuit are subject to modification to insure best operation under differing local conditions. This manual is based on General market(M) standard, and provides information on regional circuit modification through use of alternate schematic diagrams, and information on regional component variations through use of parts list.

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